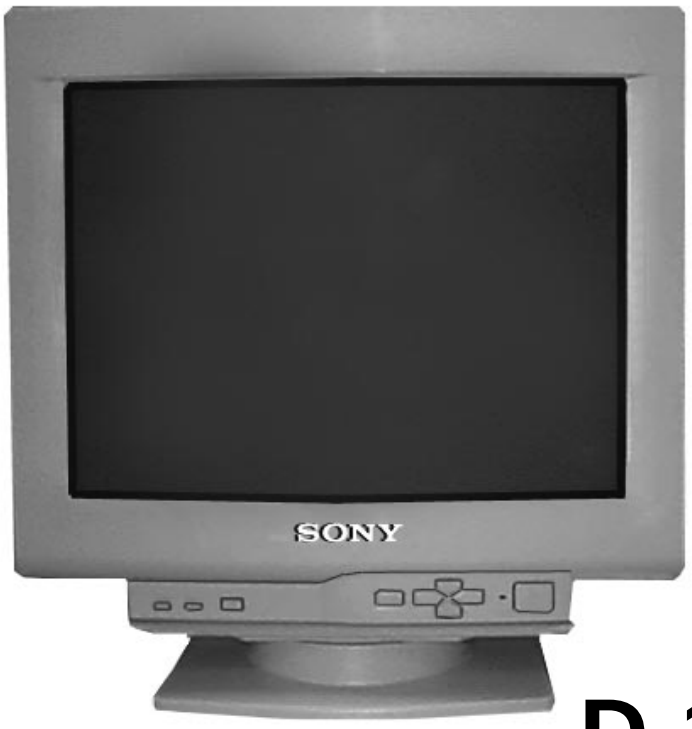
CPD-200GS

SERVICE MANUAL

CPD-200GS

U/C MODEL

Chassis No. SCC-L07A-A



D-1H CHASSIS

SPECIFICATIONS

Picture tube	0.25 mm aperture grill pitch 17 inches measured diagonally 90-degree deflection
Video image area	(16" maximum viewing image) Approx. 329.5 x 243 mm (w/h) (13 x 9 5/8 inches)
Logical resolution	Horizontal: Max. 1280 dots Vertical: Max. 1024 lines
Physical resolution	Horizontal: Max. 1024 dots Vertical: Max. 768 lines
Standard image area	Approx. 312 x 234 mm (w/h) (12 3/8 x 9 1/4inches)
Deflection frequency	Horizontal: 30 to 85 KHz Vertical: 50 to120 Hz
AC input voltage / current	100 to 240 V, 50-60 Hz, 1.9 - 1.1 A
Dimensions	406 x 432 x 420 mm (w/h/d) (16 x 17 1/8 x 16 5/8 inches)
Mass	Approx. 18.0 kg (39 lb 11 oz)

Design and specifications are subject to change without notice.

MICROFILM

COLOR COMPUTER DISPLAY

SONY®

POWER SAVING FUNCTION

This monitor meets the power saving guidelines set by the EPA Energy Star Program as well as the more stringent TC092 guidelines (NUTEK). It is capable of reduced power consumption when used with a computer equipped with Display Power Management Signaling (DPMS). By sensing the absence of the sync signal coming from the computer, it will reduce the power consumption as follows:

CAUTION: The Power Saving function will automatically put the monitor into Active-off state if the power switch is turned on without any video signal input. Once the horizontal and vertical syncs are sensed, the monitor will automatically return to its Normal operation state.

	State	Power consumption	Required resumption time	⏻ Power indicator	POWER SAVING indicator
1	Normal Operation	100%	————	green on	off
2	Suspend (1st step of power saving)	approx. 13%	approx. 5 sec.	green on	orange on
3	Active-off (2nd step of power saving)	approx. 7%	approx. 15 sec.	off	orange on
4	Power - Off	0%	————	off	off

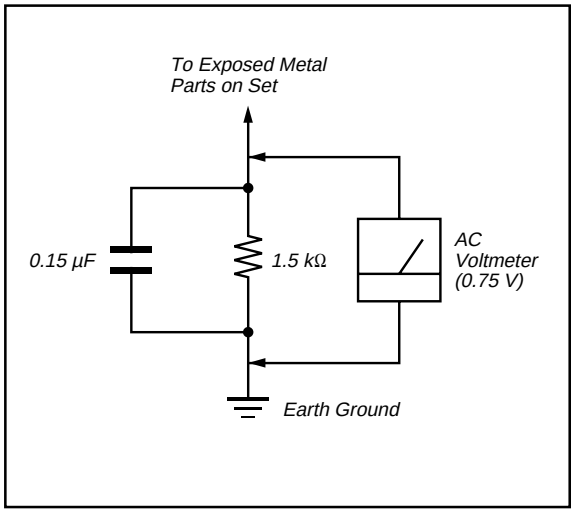
TIMING SPECIFICATION

MODE	1	2	3	4	5	6	7	8	9	10
Resolution (H x V)	640 X 480	800 X 600	800 x 600	832 X 624	1024 x 768	1024 x 768	1024 x 768	720 x 400	640 x 480	1280 x 1024
Dot Clock (MHz)	25.175	49.500	56.250	57.283	78.750	80.000	94.500	28.322	36.000	135.000
HORIZONTAL										
Hor. Freq. (kHz)	31.469	46.875	53.674	49.725	60.024	60.241	68.677	31.469	43.269	79.976
H-Total	31.778	21.333	18.631	20.111	16.660	16.600	14.561	31.777	23.111	12.504
H-Blanking	6.356	5.172	4.409	5.586	3.657	3.800	3.725	6.355	5.333	3.022
H-Front Porch	0.636	0.323	0.569	0.559	0.203	0.400	0.508	0.636	1.556	0.119
H-Sync.	3.813	1.616	1.138	1.117	1.219	1.200	1.016	3.813	1.556	1.067
H-Back Porch	1.907	3.232	2.702	3.910	2.235	2.200	2.201	1.907	2.222	1.837
H-Active (µsec)	25.422	16.162	14.222	14.524	13.003	12.800	10.836	25.422	17.778	9.481
VERTICAL										
Ver. Freq. (Hz)	59.940	75.000	85.061	74.550	75.030	74.927	84.997	70.087	85.008	75.025
V-Total	525	625	631	667	800	804	808	449	509	1066
V-Blanking	45	25	31	43	32	36	40	49	29	42
V-Front Porch	10	1	1	1	1	3	1	12	1	1
V-Sync.	2	3	3	3	3	3	3	2	3	3
V-Back Porch	33	21	27	39	28	30	36	35	25	38
V-Active (lines)	480	600	600	624	768	768	768	400	480	1024
SYNC.										
Int(G)	No	No	No	No	No	No	No	No	No	No
Ext (H/V)/Polarity	Yes -/-	Yes +/+	Yes +/+	Yes -/-	Yes +/+	Yes -/-	Yes +/+	Yes -/+	Yes -/-	Yes +/+
Ext (CS)/Polarity	No	No	No	No	No	No	No	No	No	No
Int / Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int	Non Int

SAFETY CHECK-OUT
(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.



LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampere). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63Trd are examples of passive VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

WARNING!!

NEVER TURN ON THE POWER IN A CONDITION IN WHICH THE DEGAUSS COIL HAS BEEN REMOVED.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

AVERTISSEMENT!!

NE JAMAIS METTRE SOUS TENSION QUAND LA BOBINE DE DEMAGNETISATION EST ENLEVEE.

ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONTIONNEMENT SUSPECTE.

TABLE OF CONTENTS

The instructions given here are partial abstracts from the Operating Instruction Manual. The page numbers shown reflect those of the Operating Instruction Manual.

SECTION 1
GENERAL

Precautions

Installation

- Prevent internal heat build-up by allowing adequate air circulation. Do not place the monitor on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the monitor near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- Do not place the monitor near equipment which generates magnetism, such as a transformer or high voltage power lines.

Maintenance

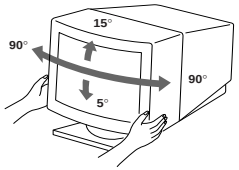
- Clean the cabinet, panel and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent, such as alcohol or benzine.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items such as a ballpoint pen or screwdriver. This type of contact may result in a scratched picture tube.

Transportation

When you transport this monitor for repair or shipment, use the original carton and packing materials.

Use of the Tilt-Swivel

With the tilt-swivel, this monitor can be adjusted to the desired angle within 180° horizontally and 20° vertically. To turn the monitor vertically and horizontally, hold it at the bottom with both hands as illustrated below.



Warning on power connection

- Use an appropriate power cord for your local power supply.
  For the customers in the U.S.A.
  If you do not use the appropriate cord, this monitor will not conform to mandatory FCC standards.

Examples of plug types:

for 100 to 120 V AC **for 200 to 240 V AC**

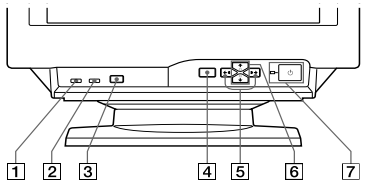
- Before disconnecting the power cord, wait at least 30 seconds after turning off the power to allow the static electricity on the CRT display surface to discharge.
- After the power has been turned on, the CRT is demagnetized (degaussed) for about 5 seconds. This generates a strong magnetic field around the metal frame, which may affect the data stored on magnetic tapes and disks near the bezel. Place magnetic recording equipment, tapes and disks away from this monitor.

The outlet should be installed near the equipment and be easily accessible.

Identifying Parts and Controls

See the pages in parentheses for further details.

Front



1 **MUTING button (page 7)**
Mutes the sound.

2 **RESET button (page 15)**
Resets the adjustments to the factory settings.

3 **GPE button (page 16)**
Selects the Graphic Picture Enhancement (GPE) mode.

4 **MENU button (pages 7 -15, 17)**
Displays the MENU OSD.

5 **◑ (contrast) (←/→) buttons (pages 7 – 15, 20)**
Adjust the contrast.

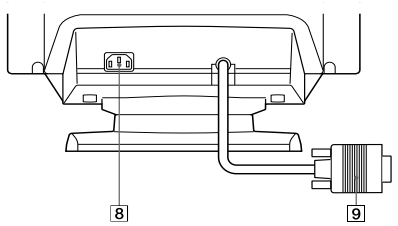
Function as the (←/→) buttons when adjusting other items.

6 **☼ (brightness) (↓/↑) buttons (pages 7 – 15)**
Adjust the picture brightness.

Function as the (↓/↑) buttons when adjusting other items.

7 **⏻ (power) switch and indicator (pages 17, 20)**
Turns the monitor on or off.
The indicator lights up in green when the monitor is turned on, and lights up in orange when the monitor is in power saving mode.

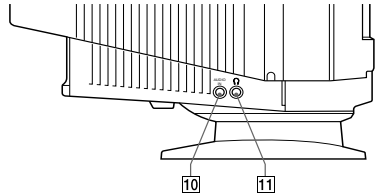
Rear



8 **AC IN connector**
Provides AC power to the monitor.

9 **Video input connector (HD15)**
Inputs RGB video signals and SYNC signals.

Side



10 **AUDIO IN jack**
Inputs audio signals when connected to the computer's audio out jack.

11 **∩ Headphones jack**
Outputs audio signals to headphones (not supplied).

EN

Setup

Before using this monitor, check that the following items are included in your carton:

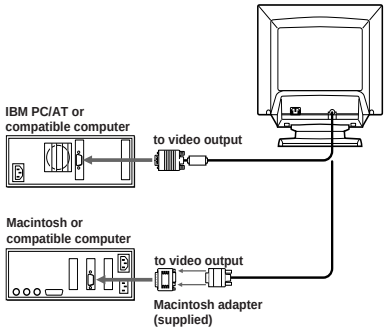
- Monitor (1)
- Power cord (1)
- Macintosh adapter (1)
- Windows® 95 Monitor Information Disk/File (1)
- Warranty card (1)
- These operating instructions (1)
- Audio miniplug cord (1)

This monitor works with any IBM or compatible system equipped with VGA or greater graphics capability. Although this monitor works with other platforms running at horizontal frequencies between 30 and 70 kHz (CPD-100GS), 30 and 85 kHz (CPD-200GS), including Macintosh and Power Macintosh systems, a cable adapter is required. Please consult your dealer for advice on which adapter is suitable for your needs.

Step 1: Connect the monitor to the computer

Connecting to an IBM PC/AT, Macintosh or compatible computer

With the computer switched off, connect the video signal cable to the computer's video output.



About the supplied Macintosh adapter

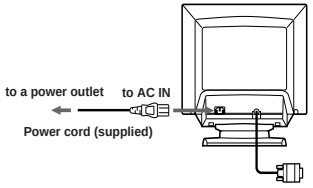
The supplied Macintosh adapter is compatible with Macintosh LC, Performa, Quadra and Power Macintosh series computers. Macintosh II series and some older versions of Power Book models may need an adapter with micro switches (not supplied).

Note

Do not short the pins of the video signal cable.

Step 2: Connect the power cord

With the monitor switched off, connect one end of the power cord to the monitor and the other end to a power outlet.



Step 3: Turn on the monitor and computer

The installation of your monitor is complete.

Note

If "OUT OF SCAN RANGE" or "NO INPUT SIGNAL" appears on the screen, see "Warning Messages" on page 18.

For customers using Windows 95

Install the new model information from the "Windows 95 Monitor Information Disk" into your PC. (To install the file, refer to the attached "About the Windows 95 Monitor Information Disk/File.")

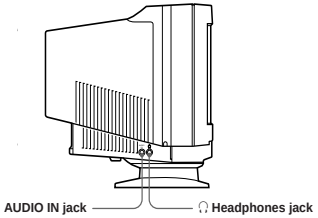
This monitor complies with the "VESA DDC" Plug&Play standard. If your PC/graphics board complies with DDC, select "Plug and Play Monitor (VESA DDC)" as "Monitor type" from "Control Panel" in Windows 95. Some PCs/graphics boards do not comply with DDC. Even if your computer complies with DDC, it may have some problems connecting with this monitor. In this case, select this monitor's model name (CPD-100GS or CPD-200GS) as "Monitor type" in Windows 95.

Selecting the On-screen Display Language

If you need to change the OSD language, see "Selecting the on-screen display language" on page 15.
The default setting is English.

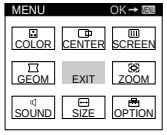
Connecting Your Monitor's Speaker

You can listen to music, sounds, and other audio files using the speaker in your monitor.
Connect the AUDIO IN jack to the audio out jack of your computer's sound card using the miniplug cord (supplied).

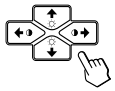


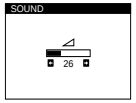
Adjusting the sound

1 Press the MENU button.
The MENU OSD appears.



2 Press the ☼↓/↑ and ◑⬅/➡ buttons to select "🔊 SOUND," and press the MENU button again.
The SOUND OSD appears.

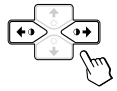




Note

While muting the sound, the 🔇 mark appears in the SOUND OSD instead of the ◿ mark. Adjust the volume to cancel the 🔇 mark and activate the speaker.

3 Press the ◑⬅/➡ buttons to adjust the volume.



The OSD automatically disappears after about 30 seconds. To close the OSD, press the MENU button again.

To reset, press the RESET button while the OSD is on.

To mute the sound

Press the MUTING button.
No sound comes from the speaker.
The 🔇 mark appears at the bottom of the screen.

To cancel, press the MUTING button again.

Using the headphones jack

You can listen to the audio signals from your computer using headphones (not supplied). The speaker turns off when headphones are connected to the headphones jack. Adjust the volume using the SOUND OSD.

EN

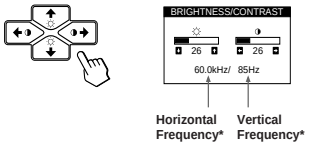
Before adjusting

- Connect the monitor and the computer, and turn them on.
- Select " (LANGUAGE)" in the OPTION OSD, then select "ENG" (English) (see page 15).

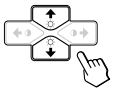
Adjusting the Picture Brightness and Contrast

Once the setting is adjusted , it will be stored in memory for all input signals received.

1 Press the ☼ (brightness) ↓/↑ or ◑ (contrast) ←/→ buttons.
The BRIGHTNESS/CONTRAST OSD appears.

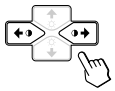


2 For brightness adjustment
Press the ☼↓/↑ buttons.



↑ . . . for more brightness
↓ . . . for less brightness

For contrast adjustment
Press the ◑←/→ buttons.



→ . . . for more contrast
← . . . for less contrast

The OSD automatically disappears after about 3 seconds.

To reset, press the RESET button while the OSD is on. The brightness and contrast are both reset to the factory settings.

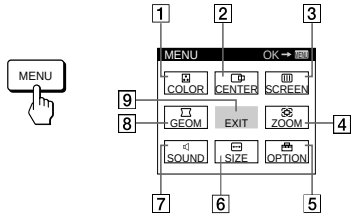
* The horizontal and vertical frequencies for the received input signal appear in the BRIGHTNESS/CONTRAST OSD.

Introducing the On-screen Display System

Most adjustments are made using the MENU OSD.

MENU OSD

Press the MENU button to display the MENU OSD.
This MENU OSD contains links to the other OSDs described below.



1 **COLOR**
Displays the COLOR OSD for adjusting the color temperature.

2 **CENTER**
Displays the CENTER OSD for adjusting the centering of the picture.

3 **SCREEN**
Displays the SCREEN OSD for adjusting the vertical and horizontal convergence, etc.

4 **ZOOM**
Displays the ZOOM OSD for enlarging and reducing the picture.

5 **OPTION**
Displays the OPTION OSD for adjusting the OSD position, degaussing the screen, selecting the OSD language, etc.

6 **SIZE**
Displays the SIZE OSD for adjusting the picture size.

7 **SOUND**
Displays the SOUND OSD for adjusting the sound.

8 **GEOM**
Displays the GEOMETRY OSD for adjusting the picture rotation and pincushion, etc.

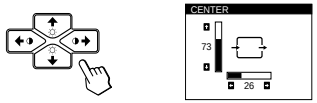
9 **EXIT**
Closes the MENU OSD.

Using the CENTER On-screen Display

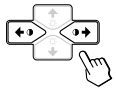
The CENTER settings allow you to adjust the centering of the picture.
Once the setting is adjusted, it will be stored in memory for the current input signal.

1 Press the MENU button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " CENTER," and press the MENU button again.
The CENTER OSD appears.

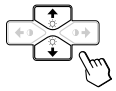


3 For horizontal adjustment
Press the ◑←/→ buttons.



→ . . . to move the picture right
← . . . to move the picture left

For vertical adjustment
Press the ☼↓/↑ buttons.



↑ . . . to move the picture up
↓ . . . to move the picture down

The OSD automatically disappears after about 30 seconds. To close the OSD, press the MENU button again.

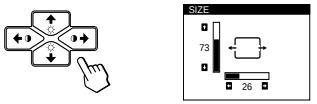
To reset, press the RESET button while the OSD is on. The horizontal and vertical centerings are both reset to the factory settings.

Using the SIZE On-screen Display

The SIZE settings allow you to adjust the size of the picture. Once the setting is adjusted, it will be stored in memory for the current input signal.

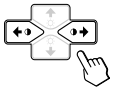
1 Press the MENU button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " SIZE," and press the MENU button again.
The SIZE OSD appears.



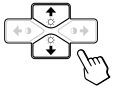
EN

3 For horizontal adjustment
Press the ◑←/→ buttons.



→ . . . to increase picture size
← . . . to decrease picture size

For vertical adjustment
Press the ☼↓/↑ buttons.



↑ . . . to increase picture size
↓ . . . to decrease picture size

The OSD automatically disappears after about 30 seconds. To close the OSD, press the MENU button again.

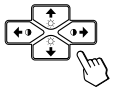
To reset, press the RESET button while the OSD is on. The horizontal and vertical sizes are both reset to the factory settings.

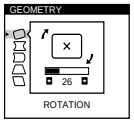
Using the GEOM (Geometry) On-screen Display

The GEOM (geometry) settings allow you to adjust the shape and orientation of the picture.
Once the rotation is adjusted, it will be stored in memory for all input signals received. All other adjustments will be stored in memory for the current input signal.

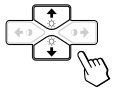
1 Press the MENU button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " GEOM," and press the MENU button again.
The GEOMETRY OSD appears.



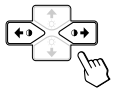


3 Press the ☼↓/↑ buttons to select the item you want to adjust.



Select	To
ROTATION	adjust the picture rotation
PINCUSHION	adjust the picture sides
PIN BALANCE	adjust the picture side balance
KEYSTONE	adjust the picture width
KEY BALANCE	adjust the picture shape balance

4 Press the ◑←/→ buttons to adjust the settings.



For	Press
ROTATION	→ . . . to rotate the picture clockwise  ← . . . to rotate the picture counterclockwise 
PINCUSHION	→ . . . to expand the picture sides  ← . . . to contract the picture sides 
PIN BALANCE	→ . . . to move the picture sides to the right  ← . . . to move the picture sides to the left 
KEYSTONE	→ . . . to increase the picture width at the top  ← . . . to decrease the picture width at the top 
KEY BALANCE	→ . . . to move the top of the picture to the right  ← . . . to move the top of the picture to the left 

The OSD automatically disappears after about 30 seconds.
To close the OSD, press the MENU button again.

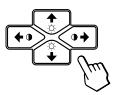
To reset, press the RESET button while the OSD is on.
The selected item is reset to the factory setting.

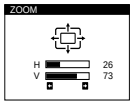
Using the ZOOM On-screen Display

The ZOOM settings allow you to enlarge or reduce the picture.
Once the setting is adjusted, it will be stored in memory for the current input signal.

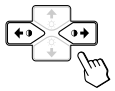
1 Press the MENU button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " ZOOM," and press the MENU button again.
The ZOOM OSD appears.





3 Press the ◑←/→buttons to adjust the picture zoom.



→ . . . to enlarge the picture
← . . . to reduce the picture

The OSD automatically disappears after about 30 seconds.
To close the OSD, press the MENU button again.

To reset, press the RESET button while the OSD is on.

Note

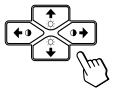
The picture zoom adjustment will stop as soon as either the horizontal or vertical size reaches its maximum or minimum value.

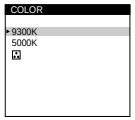
Using the COLOR On-screen Display

You can change the monitor's color temperature. For example, you can change the colors of a picture on the screen to match the actual colors of the printed picture.
Once the setting is adjusted, it will be stored in memory for all input signals received.

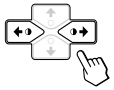
1 Press the MENU button.
The MENU OSD appears.

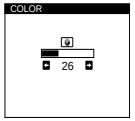
2 Press the ☼↓/↑ and ◑←/→ buttons to select " COLOR," and press the MENU button again.
The COLOR OSD appears.





If you are using Graphic Picture Enhancement (GPE)
If you are in one of the GPE modes, the following COLOR OSD appears when " COLOR" is selected.



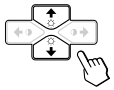


This OSD allows you to reduce the color temperature from 11,000K to 9,300K. Press the ◑←/→ buttons to adjust the color temperature.

For more information on using GPE, See "Selecting the Graphic Picture Enhancement (GPE) Mode" on page 16.

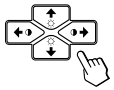
(continued)

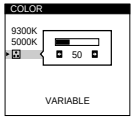
3 Press the ☼↓/↑ buttons to select the color temperature.



There are two color temperature modes in the OSD.
The preset adjustments are 9,300K and 5,000K.

Selecting your own color temperature between 9,300K and 5,000K
Press the ☼↓/↑ buttons to select " (VARIABLE)" and adjust by pressing the ◑←/→ buttons.





→ . . . for a higher temperature (bluish)
← . . . for a lower temperature (reddish)

The OSD automatically disappears after about 30 seconds.
To close the OSD, press the MENU button again.

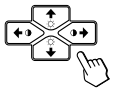
To reset, press the RESET button while the OSD is on. The selected color temperature is reset to the factory settings.

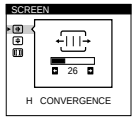
Using the SCREEN On-screen Display

Adjust convergence settings to eliminate red or blue shadows that may appear around objects on the screen.
Adjust the CANCEL MOIRE function to eliminate wavy or elliptical lines that may appear on the screen.
Once the setting is adjusted, it will be stored in memory for all input signals received.

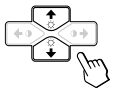
1 Press the MENU button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " SCREEN," and press the MENU button again.
The SCREEN OSD appears.





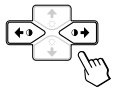
3 Press the ☼↓/↑ buttons to select the item you want to adjust.



Select	To
H CONVERGENCE	adjust the horizontal convergence
V CONVERGENCE	adjust the vertical convergence
CANCEL MOIRE	eliminate elliptical or wavy lines on the screen
* MOIRE ADJUST	adjust the degree of moire cancellation

* CANCEL MOIRE must be "ON" for " (MOIRE ADJUST)" to appear on the screen.

4 Press the ◑←/→ buttons to adjust the settings.



For	Press
H CONVERGENCE	→ . . . to shift red shadows to the right and blue shadows to the left ← . . . to shift red shadows to the left and blue shadows to the right
V CONVERGENCE	→ . . . to shift red shadows up and blue shadows down ← . . . to shift red shadows down and blue shadows up
CANCEL MOIRE	→ . . . to turn CANCEL MOIRE "ON" ← . . . to turn CANCEL MOIRE "OFF"
MOIRE ADJUST	→ . . . to increase the moire cancellation effect ← . . . to decrease the moire cancellation effect

The OSD automatically disappears after about 30 seconds.
To close the OSD, press the MENU button again.

To reset, press the RESET button while the OSD is on.
The selected item is reset to the factory setting.

Using the OPTION On-screen Display

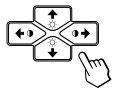
The OPTION OSD allows you to manually degauss the screen and adjust settings such as the OSD position and OSD language. It also allows you to lock the controls.

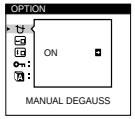
Degaussing the screen

The monitor screen is automatically degaussed (demagnetized) when the power is turned on.
You can also manually degauss the monitor.

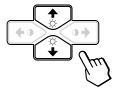
1 Press the MENU button.
The MENU OSD appears.

2 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the MENU button again.
The OPTION OSD appears.

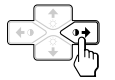




3 Press the ☼↓/↑ buttons to select " (MANUAL DEGAUSS)."



4 Press the ◑ → button.
The screen is degaussed for about 5 seconds.



If you need to degauss the screen a second time, wait for at least 20 minutes before repeating the steps above.

The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the MENU button again.

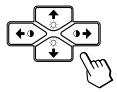
EN

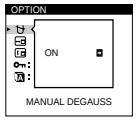
Changing the on-screen display position

You can change the OSD position (for example, when you want to adjust the picture behind the OSD).

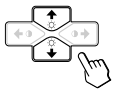
1 Press the MENU button.
The MENU OSD appears.

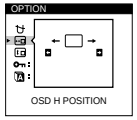
2 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the MENU button again.
The OPTION OSD appears.



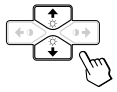


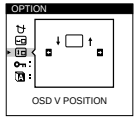
3 Press the ☼↓/↑ buttons to select " (OSD H POSITION)" or " (OSD V POSITION)."
Select " (OSD H POSITION)" to adjust the horizontal position.



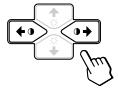


Select " (OSD V POSITION)" to adjust the vertical position.





4 Press the ◑←/→ buttons to move the OSD to the desired position.



The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the MENU button again.

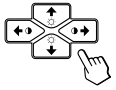
To reset, press the RESET button while the OSD is on.

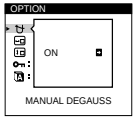
Locking the controls

The control lock function disables all of the buttons on the front panel except the ⏻ (power) switch and MENU button.

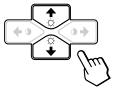
1 Press the MENU button.
The MENU OSD appears.

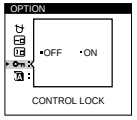
2 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the MENU button again.
The OPTION OSD appears.



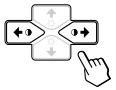


3 Press the ☼↓/↑ buttons to select " (CONTROL LOCK)."





4 Press the ◑←/→ buttons to select "ON."



The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the MENU button again.

Once you select "ON," you cannot select any items except "EXIT" and " OPTION" in the MENU OSD.
If you press any button other than the ⏻ (power) switch and MENU button, the mark appears on the screen.

To cancel the control lock

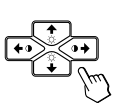
Repeat steps 1 through 3 above and press the ◑←/→ buttons to select "OFF."

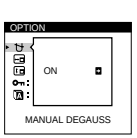
Selecting the on-screen display language

English, French, German, Spanish and Japanese versions of the OSDs are available.

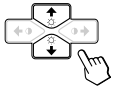
1 Press the MENU button.
The MENU OSD appears.

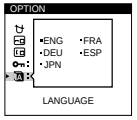
2 Press the ☼↓/↑ and ◑←/→ buttons to select " OPTION," and press the MENU button again.
The OPTION OSD appears.



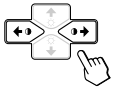


3 Press the ☼↓/↑ buttons to select " (LANGUAGE)."





4 Press the ◑←/→ buttons to select the desired language.



ENG: English, FRA: French, DEU: German,
ESP: Spanish, or JPN: Japanese.

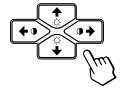
The OPTION OSD automatically disappears after about 30 seconds.
To close the OSD, press the MENU button again.

To reset to English, press the RESET button while the OSD is on.

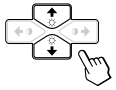
Resetting the Adjustments

Resetting an adjustment item

1 Press the MENU, ☼↓/↑ and ◑←/→buttons to select the OSD containing the item you want to reset.



2 Press the ☼↓/↑ buttons to select the item you want to reset.



3 Press the RESET button.

Resetting all of the adjustment data for the current input signal

When there is no OSD displayed, press the RESET button.
All of the adjustments data for the current input signal is reset to the factory settings.
Note that adjustment data not affected by changes in input signal (OSD language , OSD position and the control lock function) is not reset to the factory settings.

Resetting all of the adjustment data for all input signals

Press and hold the RESET button for more than two seconds.
All of the adjustment data, including the brightness and contrast, is reset to the factory settings.

Displaying the monitor's information

You can display the model name, serial number and year of manufacture using the monitor's INFORMATION OSD.

Press and hold the MENU button for 5 seconds.
The INFORMATION OSD appears.

The INFORMATION OSD includes the model name, serial number and manufactured year.

The OSD automatically disappears after about 30 seconds.

Power Saving Function

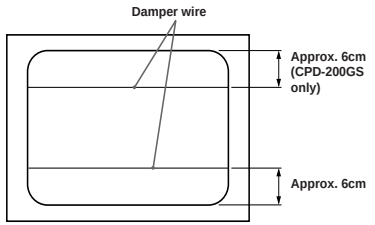
This monitor has three modes of reduced power consumption. By sensing the absence of video signal coming from the computer, it reduces power consumption as follows.

	Power consumption mode	Power consumption	Recovery time	⏻ indicator
1	Normal operation	≤ 120 W (CPD-200GS) ≤ 110 W (CPD-100GS)	—	Green
2	Standby (1st mode)	≤ 15 W	Approx. 5 sec.	Green and orange alternate
3	Suspend (2nd mode)	≤ 15 W	Approx. 5 sec.	Green and orange alternate
4	Active-off (3rd mode)	≤ 8 W	Approx. 5 sec.	Orange
5	Power-off	0 W	—	Off

Note
If no video signal is input to the monitor, the "NO INPUT SIGNAL" message (page 18) appears. After 30 seconds, the power saving function automatically puts the monitor into the active-off mode and the ⏻ indicator lights up orange. Once the horizontal and vertical sync signals are detected, the monitor automatically resumes its normal operation mode.

Damper Wires

When viewing a white background, very thin horizontal lines are visible on the screen as shown below. These lines are damper wires.
The Trinitron tube has a vertically striped aperture grille inside. The aperture grille allows more light to pass through to the screen giving the Trinitron CRT more color and brightness.
These damper wires are attached to the aperture grille to prevent vibration of the aperture grille and keep the screen image constantly stable.



Plug & Play

This monitor complies with the DDC™1 and DDC2B Display Data Channel (DDC) standards of VESA.
When a DDC1 host system is connected, the monitor synchronizes with the V. CLK in accordance with the VESA standards and outputs the EDID (Extended Display Identification Data) to the data line.
When a DDC2B host system is connected, the monitor automatically switches to the appropriate standard.

DDC™ is a trademark of the Video Electronics Standard Association.

Technical Features
Displaying the monitor's information
You can display the model name, serial number and year of manufacture using the monitor's INFORMATION OSD.
Press and hold the MENU button for 5 seconds.
The INFORMATION OSD appears.

The INFORMATION OSD includes the model name, serial number and manufactured year.
The OSD automatically disappears after about 30 seconds.
Power Saving Function
This monitor has three modes of reduced power consumption. By sensing the absence of video signal coming from the computer, it reduces power consumption as follows.

	Power consumption mode	Power consumption	Recovery time	⏻ indicator
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2	Standby (1st mode)	≤ 15 W	Approx. 5 sec.	Green and orange alternate
3	Suspend (2nd mode)	≤ 15 W	Approx. 5 sec.	Green and orange alternate
4	Active-off (3rd mode)	≤ 8 W	Approx. 5 sec.	Orange
5	Power-off	0 W	—	Off

Note
If no video signal is input to the monitor, the "NO INPUT SIGNAL" message (page 18) appears. After 30 seconds, the power saving function automatically puts the monitor into the active-off mode and the ⏻ indicator lights up orange. Once the horizontal and vertical sync signals are detected, the monitor automatically resumes its normal operation mode.
Damper Wires
When viewing a white background, very thin horizontal lines are visible on the screen as shown below. These lines are damper wires.
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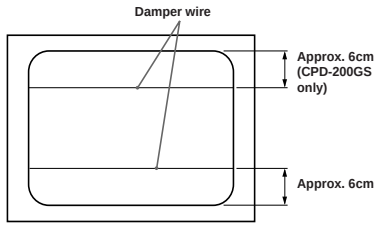
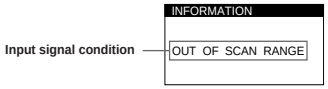


Plug & Play
This monitor complies with the DDC™1 and DDC2B Display Data Channel (DDC) standards of VESA.
When a DDC1 host system is connected, the monitor synchronizes with the V. CLK in accordance with the VESA standards and outputs the EDID (Extended Display Identification Data) to the data line.
When a DDC2B host system is connected, the monitor automatically switches to the appropriate standard.
DDC™ is a trademark of the Video Electronics Standard Association.

Warning Messages

If there is something wrong with the input signal, one of the following messages appears.
The message disappears after about 30 seconds.



The input signal condition

"OUT OF SCAN RANGE" indicates that the input signal is not supported by the monitor's specifications.

"NO INPUT SIGNAL" indicates that no signal is input.

To solve these problems, see "Troubleshooting" below.

Troubleshooting

This section may help you isolate the cause of a problem and as a result, eliminate the need to contact technical support.

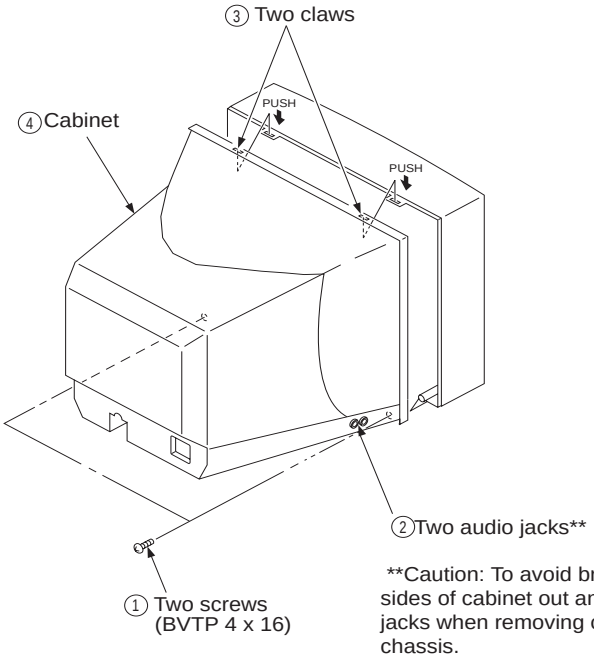
Symptom	Check these items
No picture	
If the ⏻ indicator is not lit	• Check that the power cord is properly connected. • Check that the ⏻ (power) switch is in the "on" position.
If the "NO INPUT SIGNAL" message appears on the screen, or if the ⏻ indicator is either orange or alternating between green and orange	• Try pressing any key on the computer keyboard. • Check that your computer power switch is in the "on" position. • Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets. • Ensure that no pins are bent or pushed in the HD15 video input connector. • Check that the video board is completely seated in the proper bus slot.
If the "OUT OF SCAN RANGE" message appears on the screen	• Check that the video frequency range is within that specified for the monitor. Horizontal: 30 – 70 kHz (CPD-100GS), 30 – 85 kHz (CPD-200GS) Vertical: 50 – 120 Hz Refer to your computer's instruction manual to adjust the video frequency range. • If you are using a video signal cable adapter, check that it is the correct one.
If no message is displayed and the ⏻ indicator is green or flashing orange	• See "Self-diagnosis Function" (page 20).
Picture is scrambled	• Check your graphics board manual for the proper monitor setting. • Check this manual and confirm that the graphics mode and the frequency you are trying to operate at is supported. Even if the frequency is within the proper range, some video boards may have a sync pulse that is too narrow for the monitor to sync correctly.
Color is not uniform	• Degauss the monitor (page 13). If you place equipment which generates a magnetic field, such as a loudspeaker, near the monitor, or you change the direction of the monitor, color may lose uniformity. The degauss function demagnetizes the metal frame of the CRT to obtain a neutral field for uniform color reproduction. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result.
You cannot adjust the monitor with the buttons on the front panel	• If the control lock function is set to on, set it to off using the OPTION OSD (page 14).

Symptom	Check these items
Screen image is not centered or sized properly	• Adjust the size or centering (page 9). • Some video modes do not fill the screen to the edges. This problem tends to occur with certain video boards.
Edges of the image are curved	• Adjust the geometry (page 10).
White lines show red or blue shadows at edges	• Adjust the convergence (pages 12 – 13).
Picture is fuzzy	• Adjust the contrast and brightness (page 8). • Degauss the monitor (page 13). If you place equipment which generates a magnetic field, such as a loudspeaker, near the monitor, or you change the direction of the monitor, color may lose uniformity. The degauss function demagnetizes the metal frame of the CRT to obtain a neutral field for uniform color reproduction. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result. • If red or blue shadows appear along the edges of images, adjust the convergence (pages 12 – 13). • If the moire is cancelled, the picture may become fuzzy. Decrease the moire cancellation effect (pages 12 – 13).
Picture bounces or has wavy oscillations	• Isolate and eliminate any potential sources of electric or magnetic fields. Common causes for this symptom are electric fans, fluorescent lighting or laser printers. • If you have another monitor close to this monitor, increase the distance between them to reduce the interference. • Try plugging the monitor into a different AC outlet, preferably on a different circuit. • Try the monitor on a different computer in a different room.
Picture is flickering	• Set the refresh rate on the computer to obtain the best possible picture by referring to your computer's manual.
Picture appears to be ghosting	• Eliminate the use of video cable extensions and/or video switch boxes if this symptom occurs. Excessive cable length or a weak connection can produce this symptom.
Wavy or elliptical (moire) pattern is visible	• Cancel the moire (pages 12 – 13). The moire may be modified depending on the connected computer. • Due to the relationship between resolution, monitor dot pitch and the pitch of some image patterns, certain screen backgrounds sometimes show moire. Change your desktop pattern.
Two fine horizontal lines (wires) are visible	• These wires stabilize the vertically striped aperture grille (page 17). This aperture grille allows more light to pass through to the screen giving the Trinitron CRT more color and brightness.
Hum is heard right after the power is turned on	• When the power is turned on, the auto-degauss cycle is activated. While the auto-degauss cycle is activated, a hum may be heard. The same hum is heard when the monitor is manually degaussed. This is not a malfunction.

• If the problem persists, call your authorized Sony dealer from a location near your monitor.
• Note the model name and the serial number of your monitor. Also note the make and name of your video board.

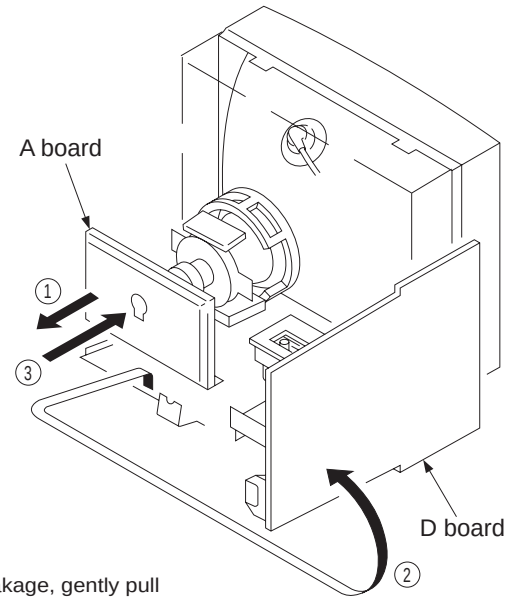
SECTION 2
DISASSEMBLY

2-1. CABINET REMOVAL

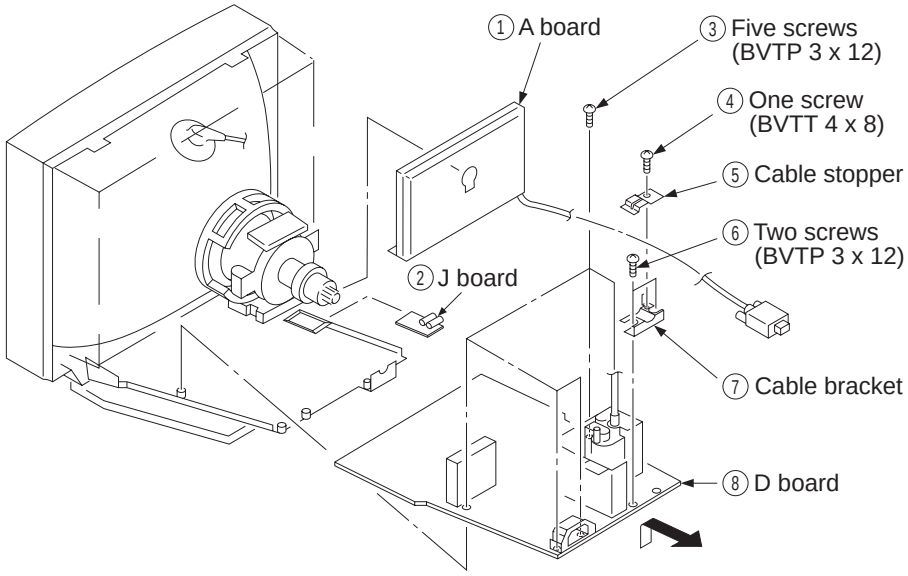


**Caution: To avoid breakage, gently pull sides of cabinet out and over the audio jacks when removing cabinet from chassis.

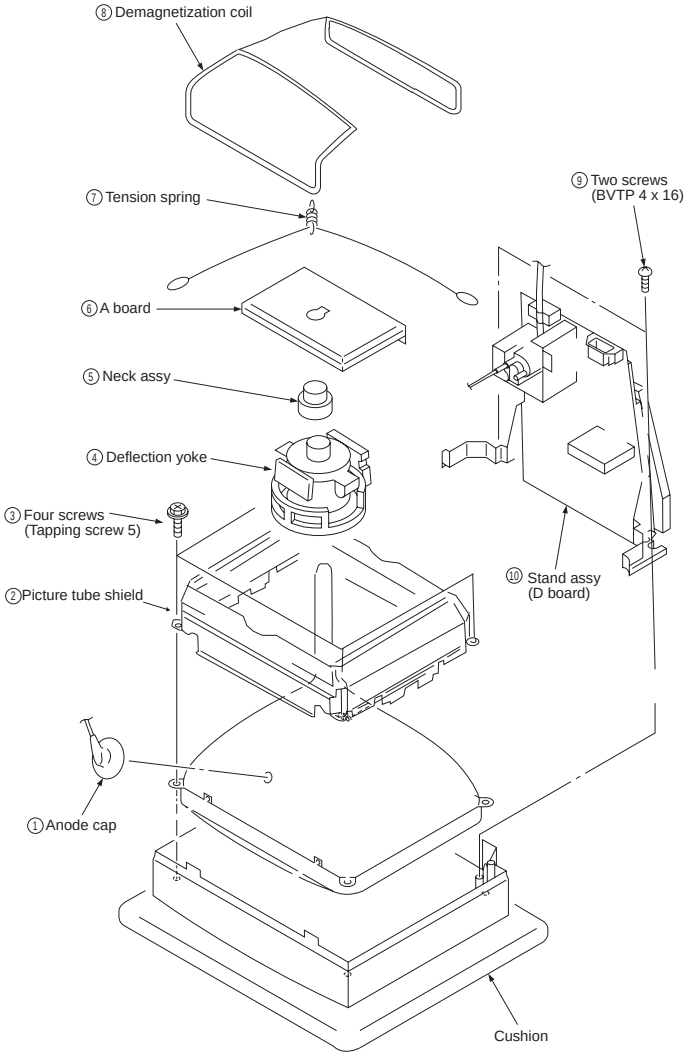
2-2. SERVICE POSITION



2-3. D, A and J BOARD REMOVAL



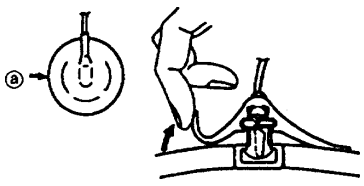
2-4. PICTURE TUBE REMOVAL



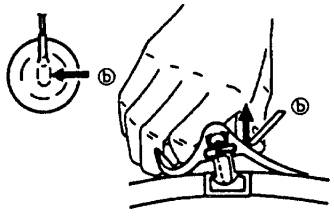
REMOVAL OF THE ANODE-CAP

NOTE: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

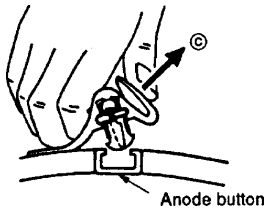
REMOVAL PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by arrow ⓐ.



② Use your thumb to pull the rubber cap firmly in the direction indicated by arrow ⓑ.



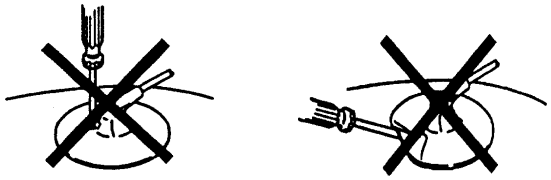
③ When one side of the rubber cap separates from the anode button, the anode-cap can be removed by turning the rubber cap and pulling it in the direction of arrow ⓒ.

HOW TO HANDLE AN ANODE-CAP

① Do not use sharp objects which may cause damage to the surface of the anode-cap.

② Do not squeeze the rubber covering too hard to avoid damaging the anode-cap. A material fitting called a shatter-hook terminal is built into the rubber.

③ Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.



SECTION 3
SAFETY RELATED ADJUSTMENT

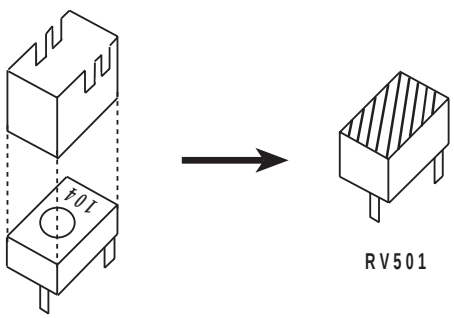
● **When replacing parts shown in the table below, the following operational checks must be performed as a safety precaution against X-ray emissions from the unit.**

D - BOARD
Part Replaced (⧓)
RV501
Part Replaced (◪)
RV501, T501, R545, R546, R548, R550, R547, R549, R552, D517, IC605, IC901, C540, C542, C544, C541, C535, IC501, C558, R567, R564, C555, C553, C554, C561

※ Allow the unit to warm up for one minute prior to checking the following conditions:

a) HV Regulator Check

1) Input white cross hatch signal. (fH = 64 kHz)
2) Minimum CONT and BRT controls.
3) Cut off Screen VR (G2).
4) Input voltage: 120 ± 2 VAC
5) Confirm that the voltage is within the voltage range shown below.
   Standard voltage: 25.0 ± 0.5KVDC
6) When replacing components identified by ◪, make sure to recheck the High Voltage.
7) Verify the High Voltage as shown above (25 ± 0.5KVDC) is within specification. If not, set H. SIZE data at minimum (-127) and then adjust RV501 on "D" Board.
8) After adjusting the High Voltage within specification, put the RV cover on RV501 as shown below and apply sufficient amount of RTV around RV501.



b) HV Hold-Down Check

1) Using an external DC Power supply, apply the voltage shown below between cathode of D517 on "D" Board and GND, and confirm that the HV Hold-Down circuit works. (Raster disappears)
   Apply DC Voltage: 31.4 ± 0.01 VDC

Check Condition

- Input voltage : 120 ± 2 VAC
- Input signal : (fH = 64 kHz), White Cross Hatch
- Controls : CONT (max) & BRT (center)
- B+ Voltage : 185.0 ± 3.0 VDC

c) Beam Protector Check (Software logic)

1) Using an external DC power supply, apply the voltage 8.8 ± 0.01 VDC between pin (11) of FBT (T501) and GND, and confirm that the voltage across C541 is 3.7 VDC or less.

Check Condition

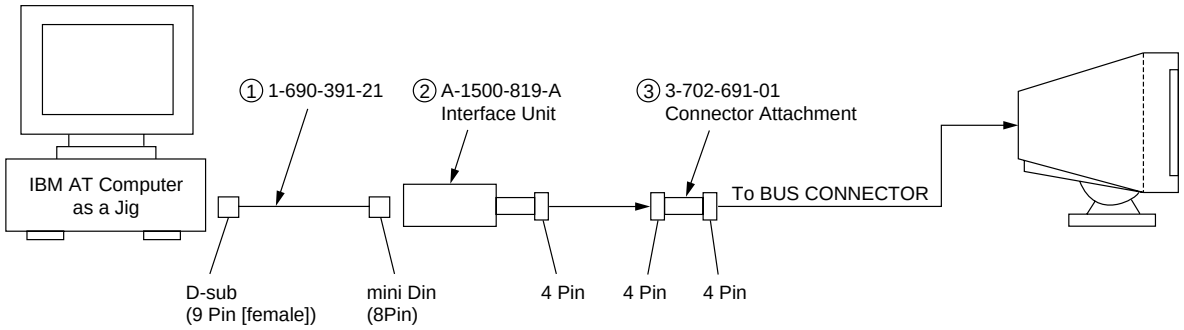
- Input voltage : 120 ± 2 VAC
- Input signal : (fH = 64 kHz), White Cross Hatch
- Controls : CONT (max) & BRT (center)

d) B+ MAX. Check

1) Input white cross hatch (fH = 64 kHz) signal.
2) CONT (max) & BRT (center)
3) Input voltage: 120 ± 2 VAC
   Note: Use NF power supply or make sure that distortion factor is 3% or less.
4) Confirm that the B+ voltage is within the voltage range shown below.
   Standard voltage: 185.0 ± 3.0 VDC

SECTION 4
ADJUSTMENTS

Connect the communication cable of the connector located on the D board on the monitor. Run the service software and then follow the instructions.



*The parts above (①~③) are necessary for DAS adjustment.

※ Allow a 30 minute warm-up period prior to making the following adjustments:

● **Landing Rough Adjustment**

1. Enter the full white signal.
2. Adjust the contrast to the maximum.
3. Input full green signal.
4. Moving the DY backward, and adjust coarsely the purity magnet sothat a green raster positions in the center of screen.
5. Moving the DY forward, adjust so that an entire screen becomes pure green.
6. Adjust the tilt of DY, and tighten lightly with a clamp.

● **Landing Fine Adjustment**

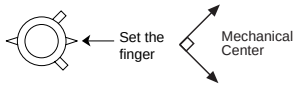
1. Place the set in the Helmholtz coil.
2. Enter a green signal only.
3. Degauss the entire screen with hand-degausser. Then auto-degauss it.
4. Attach a wobbling coil to the specified position of CRT neck.
5. Attach a landing adjuster sensor on the CRT.
6. Using a landing checker, adjust the DY position, purity, tilt of DY.
7. Clamp the DY screw.
   Clamping torque: 22 ± 2 kgcm (2.2± 0.2 N.m)

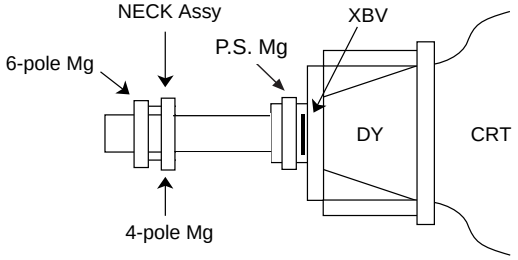
● **Convergence Rough Adjustment**

1. Enter the white crosshatch signal.
2. Adjust roughly the horizontal and vertical convergence at four-pole magnet.
3. Adjust roughly HMC and VMC at six-pole magnet.

● **Convergence Fine Adjustment**

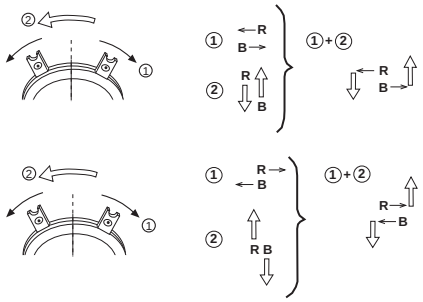
Set DY four-pole magnet to mechanical center before adjustment.
This should be prime mode.





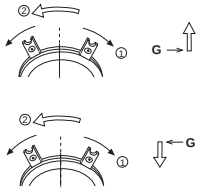
1. Receive R.B. cross-hatch.
2 Adjust H.STAT and V.STAT at four-pole magnet.

< 4 Pole Magnet>



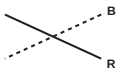
3. Receive White cross-hatch.
4. Adjust HMC and VMC at six-pole magnet.

< 6 Pole Magnet>



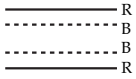
5. Receive R.B. cross-hatch.
6. Adjust H.TILT by swinging the DY neck right and left.
7. Adjust XCV with XCV core.

XCV movement



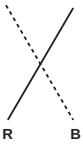
8. Adjust V.TILT with TLV VR.

TLV movement



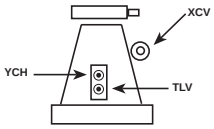
9. Adjust Y.CROSS with YCH VR.

YCH movement



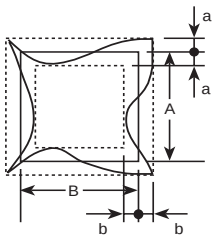
10. Paint lock the four-pole and six-pole Mg.

<VR Adjustment on DY>



<Zero Position NECK Ass'y>

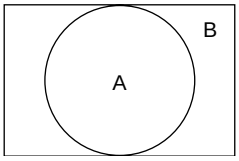
● **Vertical and Horizontal Position and Size Specification**



a < 2.5 mm
b < 2.5 mm

A	B
202	270

● **Convergence Specification**

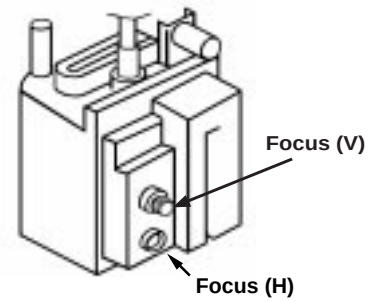


Horizontal and Vertical

A ≦ **0.30mm**
B ≦ **0.30mm**

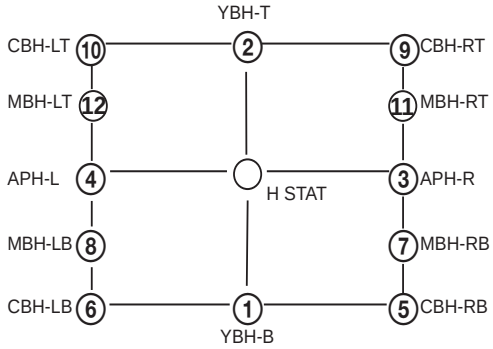
● **Focus adjustment**

Adjust focus (V) and focus (H) for optimum focus.



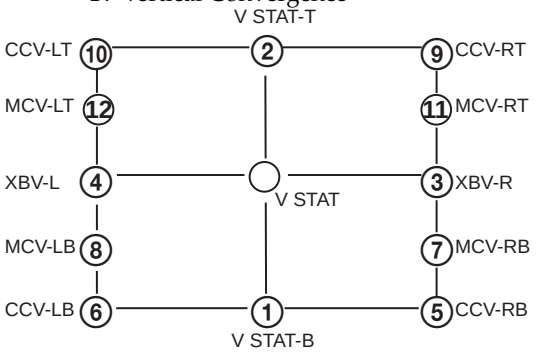
11. Digital Convergence Adjustment

A. Horizontal Convergence



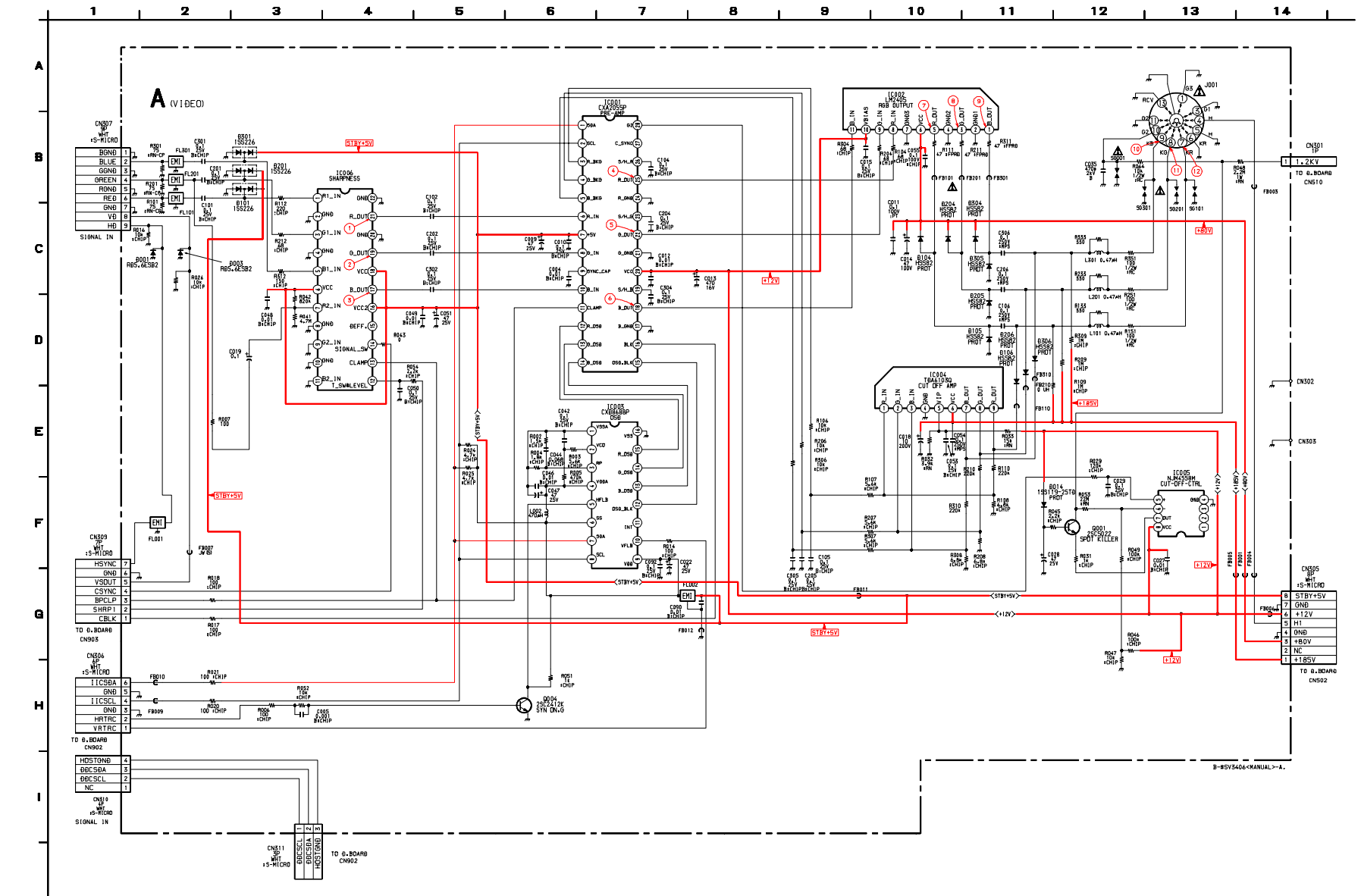
Adjust each misconvergence point in sequence.

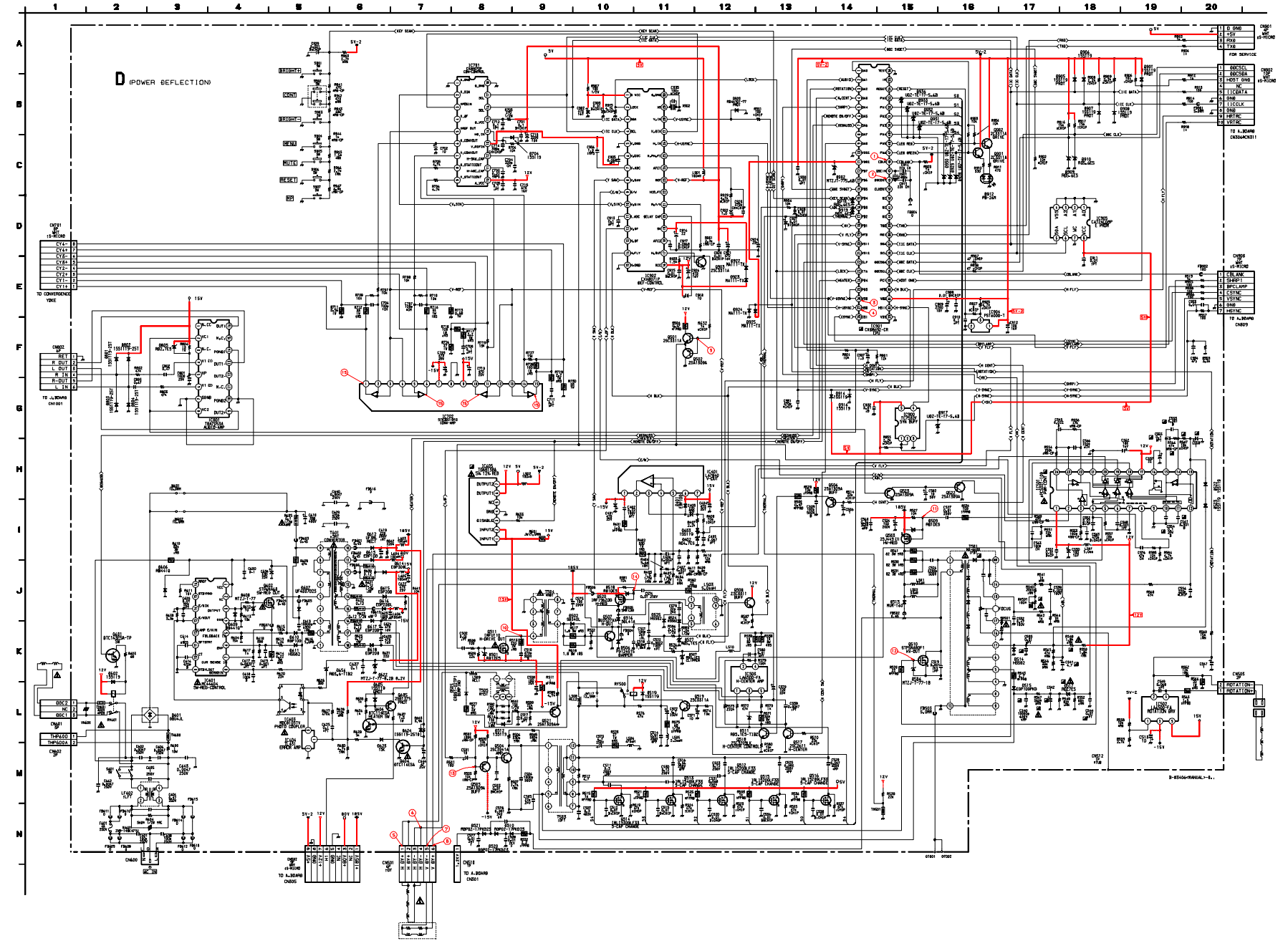
B. Vertical Convergence



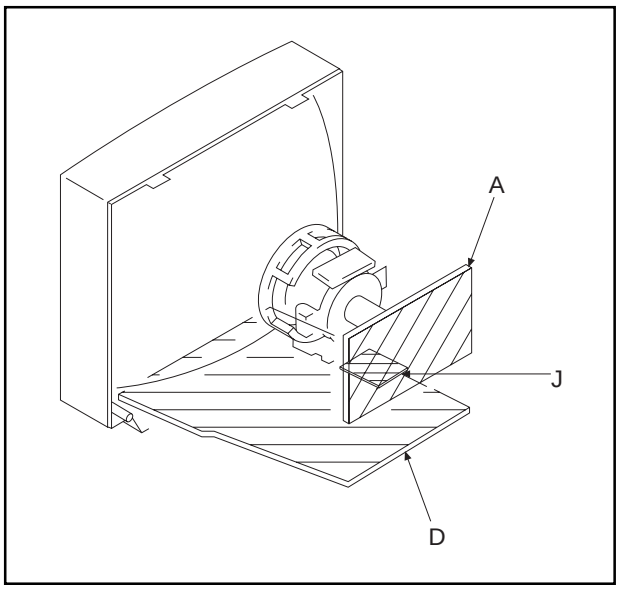
Adjust each misconvergence point in sequence.

C. Repeat the procedure of A and B so that the convergence of the whole screen is within the specification.


A (VIDEO)
CN507
6P
WHT
S-MICRO
BGND 1
BLUE 2
GGND 3
GREEN 4
RGND 5
RED 6
GND 7
VD 8
HD 9
SIGNAL IN
CN309
9P
WHT
S-MICRO
HSYNC 7
GND 6
VSOUT 5
CSYNC 4
BPCLP 3
SHRP1 2
CBLK 1
TO B.BOARB
CN903
CN506
6P
WHT
S-MICRO
IICSDA 6
GND 5
IICSCL 4
GND 3
HRTRC 2
VRTRC 1
TO B.BOARB
CN902
CN510
4P
WHT
S-MICRO
HDSTGND 4
DDCSDA 3
DDCSCL 2
NC 1
SIGNAL IN
CN511
3P
WHT
S-MICRO
DDCSCL 1
DDCSDA 2
GND 3
TO B.BOARB
CN902
IC001
CXA2055Q
PRE-AMP
IC006
SHARPNESS
IC003
CX20468BP
OSD
IC002
LM2405
RGB OUTPUT
IC004
TBA6109Q
CUT OFF AMP
IC005
M-NJ555M
CUT-OFF-CTRL
Q001
2SC5022
SPOT KILLER
Q004
2SC2412K
SYN ON/G
J001
CRT
CN501
1P
1.2KV
TO B.BOARB
CN510
CN302
CN303
CN505
9P
WHT
S-MICRO
STBY+5V 8
GND 7
+12V 6
H1 5
GND 4
+80V 3
NC 2
+185V 1
TO B.BOARB
CN502
STBY+5V
+12V
+185V
+80V
B-HSV3406<MANUAL>-A.


D (POWER DEFLECTION)

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytic.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4 W (CHIP: 1/10 W)

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- Δ : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth-ground.
- ⏚ : earth-chassis.
- The components identified by ⧓ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪, make the necessary adjustments by using RV501 (⧓) as indicated. (See page 15)

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

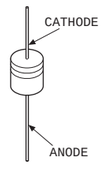
- When replacing parts shown in the table below, be sure to perform the safety related adjustment.

D - BOARD
Part Replaced (⧓)
RV501
Part Replaced (◪)
RV501, T501, R545, R546, R548, R550, R547, R549, R552, D517, IC605, IC901, C540, C542, C544, C541, C535, IC501, C558, R567, R564, C555, C553, C554, C561

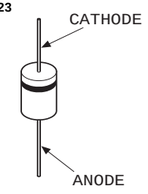
- All voltages are in volts.
- Readings are taken with a 10 MΩ digital multimeter
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- * : Cannot be measured.
- Circled numbers are waveform references.
- ——— : B +bus.
- – – – : B - bus.

5-4. SEMICONDUCTORS

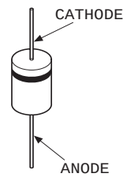
RB441QT-77
RD4.7ES
RD5.1ES
RD5.6ES-B2
RD8.2ES-B2
RD10ES-B2
RD12ES-B2
RD18ES-BS
RD27ES-B2
1SS119-25TD



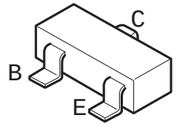
EGP10D
EGP20GPKG23
ELIZ
ERB91-02
GP08D
MUR160
RGP02-17EL



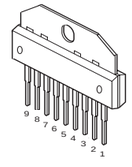
EGP30D
UF3ML-6505
UF4007G23
RGP02-20EL-6394
3DL41A (LC6-15)
HSS 82



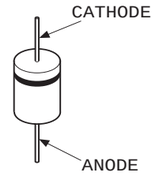
2SA1162-G



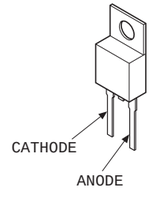
TDA6103Q



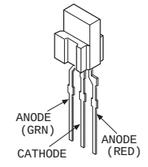
SB340L-6489



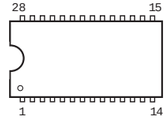
5TUZ52



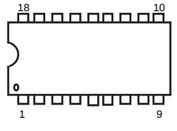
SPB-26



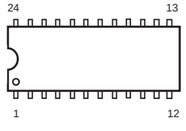
CXA2055P



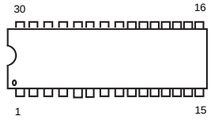
CXA8070A



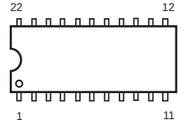
UPC5021



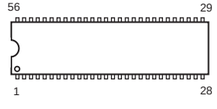
CXA8071P



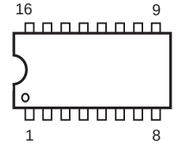
CXA2093S



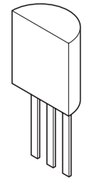
CXD8692



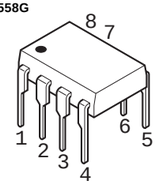
CXD8688P
MC44604
TDA7053A



TL 431CLP



24IC08B
UPC4558G



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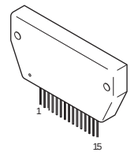

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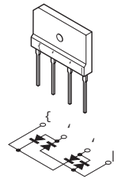
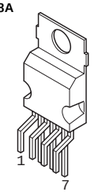
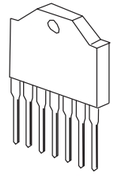


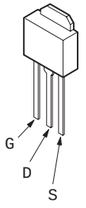
TDA 8138A



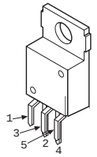
LA7840



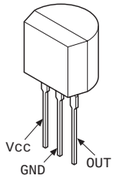
IRFU110



LA 6500-FA



PST600D-T



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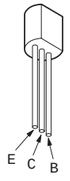
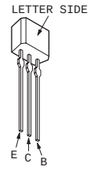


2A1309A
2C3311A
DTC143ES
DTC114EA



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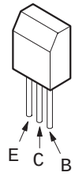
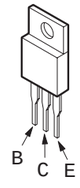
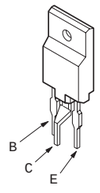


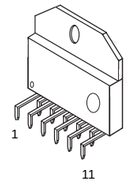
2SB1094F
2SB1375



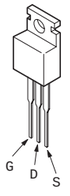
BU2522AX



LM2405T



IRL1530GLF



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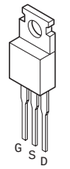
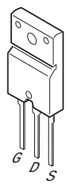
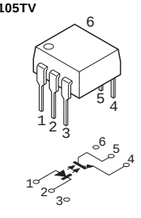


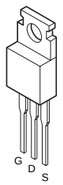
TP6NA60F



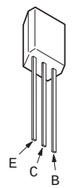
M0C8105TV



IRFI9630



2SC3941



SECTION 6
EXPLODED VIEWS

• Items with no part number and no description are not stocked because they are seldom required for routine service.

• The component parts of an assembly are indicated by the reference numbers in the remarks column.

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Note:

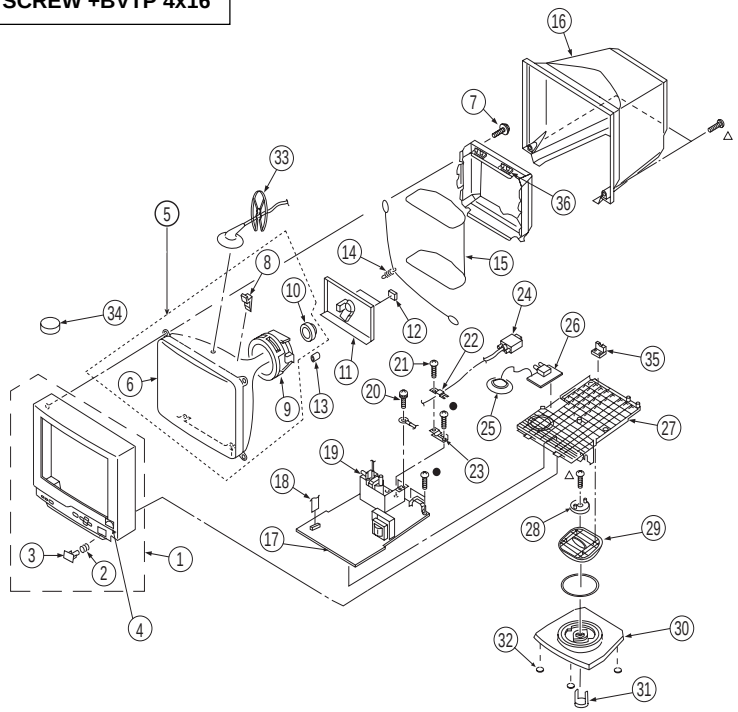
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

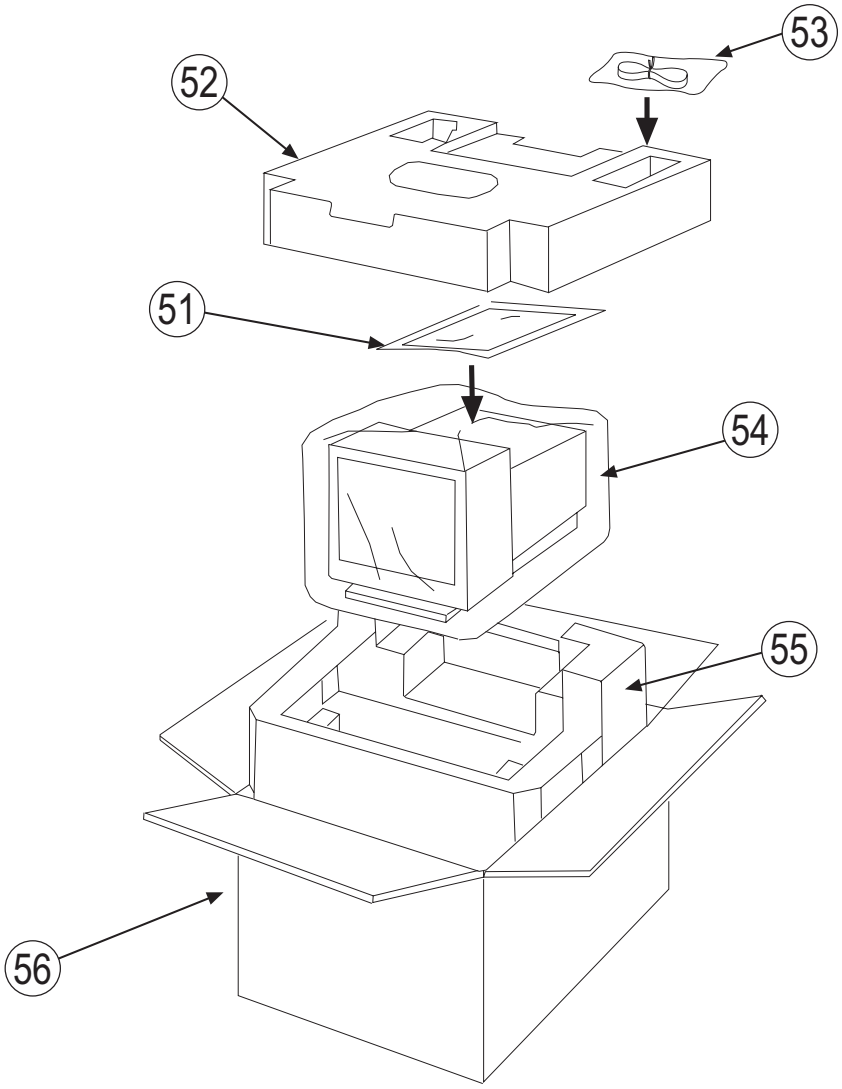
6-1. CHASSIS

●	7-685-648-79	SCREW +BVTP 3x12
△	7-685-663-71	SCREW +BVTP 4x16



REF.NO.	PART NO.	DESCRIPTION	REMARK
1 *	X-4034-941-2	BEZEL ASSY	2-3
2	3-653-339-21	SPRING, COMPRESSION	
3	4-060-546-01	BUTTON, POWER	
4 *	4-045-471-01	LABEL, ENERGY STAR	
5 ⚠	8-738-733-83	ITC ASSY, 17FRFM-R3	6,8,9,10
6 ⚠	8-738-733-05	CRT, 17FRFM	
7	4-365-808-01	SCREW (5), TAPPING	
8	4-040-897-01	SPACER, DY	
9 ⚠	8-451-490-11	DY Y17FRJ3-M	
10 ⚠	1-452-923-11	NECK ASSY	
11 *	A-1298-187-A	A BOARD, COMPLETE	
12 *	4-061-571-01	CUSHION (A)	
13	1-500-386-11	FILTER CLAMP (FERRITE CORE)	
14 *	4-061-573-01	SPRING, TENSION	
15 ⚠	1-416-282-21	COIL, DEMAGNETIZATION	
16	4-061-061-02	CABINET	
17 *	A-1346-644-A	D BOARD, COMPLETE	
18 *	1-900-801-73	CONNECTOR, 6P	
19 ⚠	1-453-241-11	TRANSFORMER ASSY, FLYBACK (NX-4400//X4L4)	
20	4-389-025-01	SCREW (M4x8)(EXT.TOOTHWASHER)	
21	7-685-881-09	SCREW + BVTT 4x8 (S)	
22 *	4-045-131-01	STOPPER, CABLE	
23 *	4-045-130-01	BRACKET, CABLE	
24 *	1-782-837-11	CABLE ASSY VIDEO (15P D-SUB)	
25	1-505-701-11	SPEAKER	
26 *	A-1388-207-A	J BOARD, MOUNTED	
27 *	4-060-541-01	BRACKET, CHASSIS	
28	4-060-531-01	STOPPER (A),	
29	4-060-534-01	SLIDER	
30	X-4034-870-1	STAND BASE, ASSY	
31	4-041-621-21	STOPPER (B)	
32 *	4-060-533-01	CUSHION	
33	3-704-372-31	HOLDER, HV CABLE	
34	1-452-032-11	MAGNET, DISC	
35	4-060-542-01	COVER, CABLE	
36 *	4-056-260-01	DGC, SPACER	

6-2. PACKING MATERIALS



REF.NO.		PART NO.	DESCRIPTION	REMARK
51		3-860-844-11	MANUAL, INSTRUCTION	
52	*	4-059-802-01	CUSHION (UPPER) ASSY.	
53	⚠	1-776-027-41	CORD SET, POWER	
54	*	4-041-927-11	BAG, POLYETHYLENE	
55	*	4-059-803-02	CUSHION (LOWER) ASSY.	
56	*	4-061-062-01	INDIVIDUAL CARTON	

SECTION 7
ELECTRICAL PARTS LIST

A

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

CAPACITORS
- MF = µF

INDUCTORS
- UH = µH, MMH = mH

When indicating parts by reference number, please include the board name.

A

REF.NO.	PART NO.	DESCRIPTION			REMARK
*	A-1298-187-A	A BOARD, COMPLETE			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
	CAPACITOR				
C004	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C005	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C009	1-104-664-11	ELECT	47MF	20%	25V
C010	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C011	1-106-220-00	MYLAR	0.1MF	10%	100V
C012	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C013	1-128-528-11	ELECT	470MF	20%	16V
C014	1-128-562-11	ELECT	47MF	20%	100V
C015	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C018	1-107-652-11	ELECT	10MF	20%	200V
C019	1-137-399-11	FILM	0.1MF	5%	50V
C022	1-104-664-11	ELECT	47MF	20%	25V
C027	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C028	1-104-664-11	ELECT	47MF	20%	25V
C029	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C035	1-162-134-11	CERAMIC	470PF	10%	2KV
C042	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C044	1-164-344-11	CERAMIC CHIP	0.068MF	10%	25V
C046	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C047	1-104-664-11	ELECT	47MF	20%	25V
C048	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C049	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C050	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C051	1-104-664-11	ELECT	47MF	20%	25V
C053	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C054	1-137-528-11	FILM	0.1MF	10%	250V
C055	1-104-503-12	CERAMIC CHIP	0.1MF	10%	100V
C090	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C092	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C101	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C102	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C104	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C105	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C106	1-137-528-11	FILM	0.1MF	10%	250V
C201	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C202	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C204	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C205	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C206	1-137-528-11	FILM	0.1MF	10%	250V
C301	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C302	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C304	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C305	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C306	1-137-528-11	FILM	0.1MF	10%	250V
	CONNECTOR				
CN301	1-506-108-41	PIN, CONNECTOR (TERMINAL PIN)			
CN302	1-695-915-11	TAB (CONTACT)			
CN303	1-695-915-11	TAB (CONTACT)			
CN305	1-564-511-11	PLUG, CONNECTOR 8P			
CN306 *	1-564-509-11	PLUG, CONNECTOR 6P			
CN307 *	1-564-512-11	PLUG, CONNECTOR 9P			
CN309 *	1-564-510-11	PLUG, CONNECTOR 7P			
CN310 *	1-564-507-11	PLUG, CONNECTOR 4P			
CN311 *	1-564-506-11	PLUG, CONNECTOR 3P			
	DIODE				
D001	8-719-109-89	DIODE RD5.6ESB2			
D003	8-719-109-89	DIODE RD5.6ESB2			
D014	8-719-911-19	DIODE 1SS119-25			
D101	8-719-800-76	DIODE 1SS226			
D104	8-719-970-83	DIODE HSS82			
D105	8-719-970-83	DIODE HSS82			
D106	8-719-970-83	DIODE HSS82			
D201	8-719-800-76	DIODE 1SS226			

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D204	8-719-970-83	DIODE HSS82	
D205	8-719-970-83	DIODE HSS82	
D206	8-719-970-83	DIODE HSS82	
D301	8-719-800-76	DIODE 1SS226	
D304	8-719-970-83	DIODE HSS82	
D305	8-719-970-83	DIODE HSS82	
D306	8-719-970-83	DIODE HSS82	
	FERRITE BEAD		
FB001	1-412-911-11	INDUCTOR	
FB003	1-412-911-11	INDUCTOR	
FB004	1-412-911-11	INDUCTOR	
FB005	1-412-911-11	INDUCTOR	
FB006	1-412-911-11	INDUCTOR	
FB009	1-412-911-11	INDUCTOR	
FB010	1-412-911-11	INDUCTOR	
FB011	1-412-911-11	INDUCTOR	
FB012	1-412-911-11	INDUCTOR	
FB101 ⚠	1-216-295-91	SHORT	
FB110	1-412-911-11	INDUCTOR	
FB201 ⚠	1-216-295-91	SHORT	
FB210	1-412-911-11	INDUCTOR	
FB301 ⚠	1-216-295-91	SHORT	
FB310	1-412-911-11	INDUCTOR	
	FILTER		
FL001	1-421-928-11	FILTER, NOISE	
FL002	1-412-911-11	INDUCTOR	
FL101	1-414-793-21	INDUCTOR	
FL201	1-414-793-21	INDUCTOR	
FL301	1-414-793-21	INDUCTOR	
	IC		
IC001	8-752-076-89	IC CXA2055P	
IC002	8-759-435-33	IC LM2405T	
IC003	8-759-478-65	IC CXD8688P	
IC004	8-759-434-40	IC TDA6103Q/N3,112	
IC005	8-759-100-96	IC UPC4558G2	
IC006	8-752-082-65	IC CXA2093S	
	JACK		
J001 ⚠	1-251-598-11	SOCKET, CRT	

REF.NO.	PART NO.	DESCRIPTION			REMARK
	COIL				
L002	1-410-682-31	INDUCTOR	470UH		
L101	1-410-750-41	INDUCTOR	0.47UH		
L201	1-410-750-41	INDUCTOR	0.47UH		
L301	1-410-750-41	INDUCTOR	0.47UH		
	TRANSISTOR				
Q001	8-729-032-61	TRANSISTOR 2SC5022-02			
Q004	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
	RESISTOR				
R002	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R003	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R004	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R005	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R006	1-216-025-91	METAL GLAZE	100	5%	1/10W
R007	1-216-025-91	METAL GLAZE	100	5%	1/10W
R014	1-216-025-91	METAL GLAZE	100	5%	1/10W
R016	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R017	1-216-025-91	METAL GLAZE	100	5%	1/10W
R018	1-216-025-91	METAL GLAZE	100	5%	1/10W
R020	1-216-025-91	METAL GLAZE	100	5%	1/10W
R021	1-216-025-91	METAL GLAZE	100	5%	1/10W
R024	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R025	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R026	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R029	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R031	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R032	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R033	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R041	1-208-291-11	METAL GLAZE	4.7M	5%	1/10W
R042	1-218-774-11	METAL CHIP	820K	0.50%	1/10W
R043	1-216-295-91	SHORT	0		
R045	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R046	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R047	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R048	1-211-885-21	METAL	2.2M	5%	1W
R049	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R051	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R052	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R053	1-219-621-91	METAL	22M	10%	1/4W
R054	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R064	1-202-830-00	SOLID	10K	20%	1/2W
R101	1-215-394-00	METAL	75	1%	1/4W
R104	1-216-021-00	METAL GLAZE	68	5%	1/10W
R106	1-216-073-00	METAL GLAZE	10K	5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R107	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R108	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R109	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R110	1-215-477-00	METAL	220K	1%	1/4W
R111	1-249-401-11	CARBON	47	5%	1/4W F
R112	1-216-033-00	METAL GLAZE	220	5%	1/10W
R133	1-249-411-11	CARBON	330	5%	1/4W
R151	1-202-549-00	SOLID	100	20%	1/2W
R201	1-215-394-00	METAL	75	1%	1/4W
R204	1-216-021-00	METAL GLAZE	68	5%	1/10W
R206	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R207	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R208	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R209	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R210	1-215-477-00	METAL	220K	1%	1/4W
R211	1-249-401-11	CARBON	47	5%	1/4W F
R212	1-216-021-00	METAL GLAZE	68	5%	1/10W
R233	1-249-411-11	CARBON	330	5%	1/4W
R251	1-202-549-00	SOLID	100	20%	1/2W
R301	1-215-394-00	METAL	75	1%	1/4W
R304	1-216-021-00	METAL GLAZE	68	5%	1/10W
R306	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R307	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R308	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R309	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R310	1-215-477-00	METAL	220K	1%	1/4W
R311	1-249-401-11	CARBON	47	5%	1/4W F
R312	1-216-029-00	METAL GLAZE	150	5%	1/10W
R333	1-249-411-11	CARBON	330	5%	1/4W
R351	1-202-549-00	SOLID	100	20%	1/2W

SPARK GAP

SG001	⚠ 1-519-422-11	GAP, SPARK
SG101	⚠ 1-517-499-21	GAP, SPARK
SG201	⚠ 1-517-499-21	GAP, SPARK
SG301	⚠ 1-517-499-21	GAP, SPARK

D

* **A-1346-644-A D BOARD, COMPLETE**

	1-533-223-11	CLIP, FUSE
	2-371-561-00	BUSHING (P), INSULATING
*	4-060-552-01	HOLDER, LED
	4-060-555-01	SHEET, INSULATOR
	4-062-328-01	SHIELD, D
	4-389-025-01	SCREW (M4) (EXT TOOTH WASHER)

REF.NO.	PART NO.	DESCRIPTION			REMARK

CAPACITOR

C402	1-106-228-00	MYLAR	0.22MF	10%	100V
C403	1-126-969-11	ELECT	220MF	20%	50V
C404	1-126-941-11	ELECT	470MF	20%	25V
C405	1-137-374-11	FILM	0.047MF	5%	50V
C406	1-137-368-11	FILM	0.0047MF	5%	50V
C407	1-137-372-11	FILM	0.022MF	5%	50V
C501	1-126-964-11	ELECT	10MF	20%	50V
C502	1-137-370-11	FILM	0.01MF	5%	50V
C503	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C504	1-164-645-11	CERAMIC	1000PF	10%	500V
C505	1-109-879-11	CERAMIC	22PF	5%	2KV
C506	1-126-960-11	ELECT	1MF	20%	50V
C507	1-117-964-11	FILM	0.3MF	5%	400V
C508	1-104-665-11	ELECT	100MF	20%	25V
C509	1-162-117-00	CERAMIC	100PF	10%	500V
C510	1-102-228-00	CERAMIC	470PF	10%	500V
C511	1-119-862-11	FILM	0.3MF	5%	200V
C512	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C513	1-126-964-11	ELECT	10MF	20%	50V
C514	1-119-861-11	FILM	0.91MF	5%	200V
C515	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C516	1-117-206-21	FILM	0.36MF	5%	250V
C517	1-137-370-11	FILM	0.01MF	5%	50V
C518	1-117-954-11	FILM	4300PF	3%	1.8KV
C519	1-136-538-11	FILM	0.001MF	3%	2KV
C520	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C521	1-107-444-11	CERAMIC	100PF	5%	2KV
C522	1-136-481-11	MYLAR	0.0022MF	10%	100V
C523	1-115-511-11	FILM	0.12MF	5%	200V
C524	1-107-955-11	ELECT	100MF	20%	200V
C525	1-119-860-11	FILM	.082MF	5%	200V
C526	1-164-646-11	CERAMIC	2200PF	10%	500V
C527	1-117-879-91	CAPACITOR	.01MF	10%	250V
C528	1-115-349-51	CERAMIC	0.01MF		2KV
C529	1-136-060-00	FILM	0.047MF	5%	400V
C530	1-115-511-11	FILM	0.12MF	5%	250V
C531	1-115-509-11	FILM	0.068MF	5%	250V
C532	1-137-426-11	FILM	0.47MF	10%	100V
C535	1-137-370-11	FILM	0.01MF	5%	50V
C536	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C538	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C539	1-137-418-11	FILM	0.022MF	10%	100V
C540	1-136-203-11	FILM	10000PF	5%	630V
C541	1-126-963-11	ELECT	4.7MF	20%	50V

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REF.NO.		PART NO.	DESCRIPTION			REMARK
C542		1-126-960-11	ELECT	1MF	20%	50V
C543		1-102-973-00	CERAMIC	100PF	5%	50V
C544		1-137-370-11	FILM	0.01MF	5%	50V
C545		1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C546		1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C547		1-126-960-11	ELECT	1MF	20%	50V
C548		1-137-364-11	FILM	0.001MF	5%	50V
C549		1-137-375-11	FILM	0.068MF	5%	50V
C550		1-126-933-11	ELECT	100MF	20%	16V
C551		1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C552		1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C553		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C554		1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C555		1-137-399-11	FILM	0.1MF	5%	50V
C556		1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C557		1-126-965-11	ELECT	22MF	20%	50V
C558		1-126-960-11	ELECT	1MF	20%	50V
C559		1-137-368-11	FILM	0.0047MF	5%	50V
C560		1-117-206-21	FILM	0.36MF	5%	250V
C561		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C562		1-126-933-11	ELECT	100MF	20%	16V
C563		1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C570		1-104-665-11	ELECT	100MF	20%	25V
C571		1-126-964-11	ELECT	10MF	20%	50V
C572		1-107-651-11	ELECT	4.7MF	20%	250V
C573		1-107-651-11	ELECT	4.7MF	20%	250V
C574		1-117-879-91	CAPACITOR	.01MF	10%	250V
C575		1-107-955-11	ELECT	100MF	20%	200V
C576		1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C577		1-115-349-51	CERAMIC	0.01MF		2KV
C578		1-117-214-11	CERAMIC	0.001MF	10%	2KV
C579		1-109-879-11	CERAMIC	22PF	5%	2KV
C580		1-137-370-11	FILM	0.01MF	5%	50V
C582		1-126-964-11	ELECT	10MF	20%	50V
C601	⚠	1-117-693-11	CERAMIC	100PF	10%	250V
C602	⚠	1-117-703-11	CERAMIC	0.0047MF	20%	250V
C604	⚠	1-104-708-11	FILM	0.47MF	20%	250V
C605	⚠	1-107-533-11	FILM	1MF	20%	250V
C606	⚠	1-117-703-11	CERAMIC	0.0047MF	20%	250V
C608	⚠	1-117-693-11	CERAMIC	100PF	10%	250V
C610		1-109-984-11	ELECT	390MF	20%	400V
C613		1-136-203-11	FILM	10000PF	5%	630V
C614		1-136-177-00	FILM	1MF	5%	50V
C615		1-137-364-11	FILM	0.001MF	5%	50V
C616		1-102-824-00	CERAMIC	470PF	5%	50V
C617		1-137-366-11	FILM	0.0022MF	5%	50V
C618		1-102-106-00	CERAMIC	100PF	10%	50V
C619		1-125-700-11	ELECT	220MF	20%	200V -

REF.NO.		PART NO.	DESCRIPTION			REMARK
C622		1-126-941-11	ELECT	470MF	20%	25V
C623		1-126-942-61	ELECT	1000MF	20%	25V
C624		1-126-935-11	ELECT	470MF	20%	16V
C625		1-137-399-11	FILM	0.1MF	5%	50V
C629		1-113-900-11	CERAMIC	470PF	10%	250V
C630		1-137-399-11	FILM	0.1MF	5%	50V
C633		1-126-935-11	ELECT	470MF	20%	16V
C634		1-126-940-11	ELECT	330MF	20%	25V
C635		1-137-370-11	FILM	0.01MF	5%	50V
C637		1-137-399-11	FILM	0.1MF	5%	50V
C640		1-117-703-11	CERAMIC	0.0047MF	20%	250V
C642	⚠	1-117-703-11	CERAMIC	0.0047MF	20%	250V
C643	⚠	1-117-703-11	CERAMIC	0.0047MF	20%	250V
C644		1-104-664-11	ELECT	47MF	20%	25V
C701		1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C702		1-126-964-11	ELECT	10MF	20%	50V
C703		1-136-169-00	FILM	0.22MF	5%	50V
C704		1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C705		1-137-399-11	FILM	0.1MF	5%	50V
C706		1-102-973-00	CERAMIC	100PF	5%	50V
C707		1-102-973-00	CERAMIC	100PF	5%	50V
C708		1-137-399-11	FILM	0.1MF	5%	50V
C709		1-126-941-11	ELECT	470MF	20%	25V
C710		1-126-941-11	ELECT	470MF	20%	25V
C711		1-137-399-11	FILM	0.1MF	5%	50V
C712		1-137-399-11	FILM	0.1MF	5%	50V
C713		1-126-927-11	ELECT	2200MF	20%	10V
C714		1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C715		1-126-935-11	ELECT	470MF	20%	16V
C801		1-126-942-61	ELECT	1000MF	20%	25V
C802		1-136-173-00	FILM	0.47MF	5%	50V
C803		1-136-173-00	FILM	0.47MF	5%	50V
C902		1-126-935-11	ELECT	470MF	20%	16V
C903		1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C905		1-137-375-11	FILM	0.068MF	5%	50V
C906		1-136-177-00	FILM	1MF	5%	50V
C907		1-126-960-11	ELECT	1MF	20%	50V
C908		1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C909		1-126-927-11	ELECT	2200MF	20%	10V
C910		1-137-399-11	FILM	0.1MF	5%	50V
C911		1-137-370-11	FILM	0.01MF	5%	50V
C912		1-126-933-11	ELECT	100MF	20%	16V
C913		1-137-399-11	FILM	0.1MF	5%	50V
C914		1-102-514-11	CERAMIC	22PF	5%	50V
C915		1-102-514-11	CERAMIC	22PF	5%	50V
C916		1-126-965-11	ELECT	22MF	20%	50V
C917		1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V

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REF.NO.		PART NO.	DESCRIPTION			REMARK
C918		1-126-964-11	ELECT	10MF	20%	50V
C920		1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C921		1-126-935-11	ELECT	470MF	20%	16V
C922		1-126-960-11	ELECT	1MF	20%	50V
C923		1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C924		1-126-965-11	ELECT	22MF	20%	50V
C925		1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C926		1-126-935-11	ELECT	470MF	20%	16V
C927		1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C928		1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C929		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C930		1-137-370-11	FILM	0.01MF	5%	50V
C931		1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C932		1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C933		1-137-370-11	FILM	0.01MF	5%	50V
C934		1-102-852-91	CERAMIC	47PF	5%	50V
C935		1-102-973-00	CERAMIC	100PF	5%	50V

CONNECTOR

CN501 *		1-580-798-11	CONNECTOR PIN (DY) 6P	
CN502 *		1-564-512-11	PLUG, CONNECTOR 9P	
CN510 *		1-900-802-12	CONNECTOR, 1P MINI	
CN512		1-695-915-11	TAB (CONTACT)	
CN600	⚠	1-251-227-11	INLET, AC	
CN601		1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P	
CN602 *		1-506-371-00	PIN, CONNECTOR 2P	
CN701		1-564-511-11	PLUG, CONNECTOR 8P	
CN802 *		1-564-509-11	PLUG, CONNECTOR 6P	
CN901 *		1-508-879-11	BASE POST 4P	
CN902		1-564-513-11	PLUG, CONNECTOR 10P	
CN903 *		1-564-510-11	PLUG, CONNECTOR 7P	

DIODE

D401		8-719-979-58	DIODE EGP10D	
D402		8-719-109-81	DIODE RD4.7ESB2	
D403		8-719-911-19	DIODE 1SS119-25	
D501		8-719-110-31	DIODE RD12ESB2	
D502		8-719-975-77	DIODE SB340	
D504		8-719-110-49	DIODE RD18ESB2	
D505		8-719-941-74	DIODE ERB91-02	
D506		8-719-061-21	DIODE PG124S15	
		4-382-854-11	SCREW (M3X10), P, SW (+) (FOR D506)	
D507		8-719-109-85	DIODE RD5.1ESB2	
D509		8-719-110-17	DIODE RD10ESB2	
D510		8-719-028-72	DIODE RGP02-17EL-6433	
D511		8-719-109-85	DIODE RD5.1ESB2	
D512		8-719-911-19	DIODE 1SS119-25	
D513		8-719-066-40	DIODE MUR160	
D514		8-719-970-83	DIODE HSS82	
D515		8-719-979-58	DIODE EGP10D	
D516		8-719-051-97	DIODE 3DL41A(LC6-15)	
D517	⚠	8-719-110-67	DIODE RD27ESB2	
D518		8-719-110-17	DIODE RD10ESB2	
D519		8-719-911-19	DIODE 1SS119-25	
D520		8-719-028-72	DIODE RGP02-17EL-6433	
D521		8-719-028-72	DIODE RGP02-17EL-6433	
D522		8-719-911-19	DIODE 1SS119-25	
D523		8-719-911-19	DIODE 1SS119-25	
D524		8-719-970-83	DIODE HSS82	
D525		8-719-970-83	DIODE HSS82	
D527		8-719-109-85	DIODE RD5.1ESB2	
D601	⚠	8-719-025-88	DIODE GBU4JL-6088	
D602		8-719-911-19	DIODE 1SS119-25	
D604		8-719-979-50	DIODE EGP30DL-6085	
D605		8-719-911-19	DIODE 1SS119-25	
D606		8-719-986-73	DIODE RB441Q	
D607		8-719-053-19	DIODE UF4007G23	
D608		8-719-110-49	DIODE RD18ESB2	
D609		8-719-986-73	DIODE RB441Q	
D610		8-719-302-43	DIODE EL1Z	
D611		8-719-970-83	DIODE HSS82	
D612		8-719-067-68	DIODE FMC-26UA	
D613		8-719-979-58	DIODE EGP10D	
D614		8-719-979-50	DIODE EGP30D	
D615		8-719-048-61	DIODE EGP20DL-6349	
D616		8-719-048-61	DIODE EGP20DL-6349	
D617		8-719-979-84	DIODE EGP20DPKG23	
D618		8-719-979-84	DIODE EGP20DPKG23	
D619		8-719-048-62	DIODE UF3ML-6505	
D622		8-719-110-08	DIODE RD8.2ESB2	
D623		1-215-449-00	METAL 15K 1% 1/4W	
D624		8-719-911-19	DIODE 1SS119-25	
D654		8-719-109-69	DIODE RD3.6ESB2	
D704		8-719-911-19	DIODE 1SS119-25	
D801		8-719-911-19	DIODE 1SS119-25	
D802		8-719-911-19	DIODE 1SS119-25	
D803		8-719-911-19	DIODE 1SS119-25	
D804		8-719-911-19	DIODE 1SS119-25	
D805		8-719-109-60	DIODE RD2.7ES-T1B2	
D901		8-719-911-19	DIODE 1SS119-25	
D902		8-719-923-38	DIODE MTZJ-T-77-5.6B	
D903		8-719-986-73	DIODE RB441QT-77	
D905		8-719-911-19	DIODE 1SS119-25	
D906		8-719-911-19	DIODE 1SS119-25	

D

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D907	8-719-911-19	DIODE 1SS119-25	
D908	8-719-911-19	DIODE 1SS119-25	
D909	8-719-109-89	DIODE RD5.6ESB2	
D910	8-719-109-89	DIODE RD5.6ESB2	
D912	8-719-045-19	DIODE SPB-26MVWF	
D914	8-719-911-19	DIODE 1SS119-25	
D916	8-719-911-19	DIODE 1SS119-25	
D917	8-719-158-15	DIODE RD5.6SB	
D918	8-719-109-89	DIODE RD5.6ESB2	
D919	8-719-109-89	DIODE RD5.6ESB2	
D920	8-719-986-73	DIODE RB441Q	
D922	8-719-404-49	DIODE MA111	
D923	8-719-404-49	DIODE MA111	
D924	8-719-404-49	DIODE MA111	
D925	8-719-404-49	DIODE MA111	
D928	8-719-158-15	DIODE RD5.6SB	
D929	8-719-158-15	DIODE RD5.6SB	
D930	8-719-158-15	DIODE RD5.6SB	
D931	8-719-158-15	DIODE RD5.6SB	
D932	8-719-158-15	DIODE RD5.6SB	
D933	8-719-158-15	DIODE RD5.6SB	
D934	8-719-158-15	DIODE RD5.6SB	

FUSE

F601 ⚠	1-576-231-11	FUSE (H.B.C.) 4A/250V	

FERRITE BEAD

FB502	1-410-396-41	INDUCTOR	0.45UH
FB504	1-412-911-11	INDUCTOR	
FB506	1-412-911-11	INDUCTOR	
FB601	1-410-396-41	INDUCTOR	0.45UH
FB602	1-410-396-41	INDUCTOR	0.45UH
FB603	1-410-396-41	INDUCTOR	0.45UH
FB604	1-410-396-41	INDUCTOR	0.45UH
FB605	1-412-911-11	INDUCTOR	
FB606	1-412-911-11	INDUCTOR	
FB607	1-412-911-11	INDUCTOR	
FB608 ⚠	1-412-911-11	INDUCTOR	
FB609 ⚠	1-412-911-11	INDUCTOR	
FB610 ⚠	1-412-911-11	INDUCTOR	
FB611 ⚠	1-412-911-11	INDUCTOR	
FB612 ⚠	1-412-911-11	INDUCTOR	
FB613 ⚠	1-412-911-11	INDUCTOR	
FB614 ⚠	1-412-911-11	INDUCTOR	
FB615 ⚠	1-412-911-11	INDUCTOR	
FB616	1-412-911-11	INDUCTOR	
FB617	1-412-911-11	INDUCTOR	
FB902	1-247-807-31	CARBON	100 5% 1/4W
FB904	1-543-961-11	INDUCTOR	

TERMINAL

GT001 *	1-537-738-21	TERMINAL, EARTH	
GT002 *	1-537-738-21	TERMINAL, EARTH	

IC

IC401	8-759-444-83	IC LA7840L	
	4-382-854-11	SCREW (M3X10), P, SW (+) (FOR IC401)	
IC501 ⚠	8-759-478-76	IC UPC5021-109	
IC502	8-759-803-42	IC LA6500-FA	
IC503	8-759-803-42	IC LA6500-FA	
	4-382-854-11	SCREW (M3X10), P, SW (+) (FOR IC503)	
IC601 ⚠	8-759-482-46	IC MC44604	
IC603 ⚠	8-749-012-59	IC MOC8105TV	
IC604 ⚠	8-759-908-15	IC TL431CLP	
IC605 ⚠	8-759-072-98	IC TDA8138A	
	4-382-854-11	SCREW (M3X10), P, SW (+) (FOR IC605)	
IC701	8-759-478-66	IC CXA8070P	
IC702	8-749-014-32	IC STK392-910A	
	4-382-854-21	SCREW (M3X14), P, SW (+) (FOR IC702)	
IC801	8-759-478-64	IC TDA7053A	
IC900	8-759-525-10	IC TC7SET08F(TE8SL)	
IC901	8-759-478-69	IC CXD8692S-CXC	
IC902	8-759-478-68	IC CXA8071P	
IC904	8-759-165-81	IC PST600D-T	
IC905	8-759-370-34	IC ST24C08FB6	

CHIP CONDUCTOR

JR001	1-216-296-91	SHORT	
JR002	1-216-296-91	SHORT	
JR003	1-216-296-91	SHORT	
JR004	1-216-296-91	SHORT	
JR005	1-216-296-91	SHORT	
JR006	1-216-296-91	SHORT	
JR007	1-216-296-91	SHORT	
JR008	1-216-296-91	SHORT	
JR009	1-216-296-91	SHORT	
JR010	1-216-296-91	SHORT	
JR011	1-216-296-91	SHORT	
JR012	1-216-296-91	SHORT	
JR013	1-216-296-91	SHORT	
JR014	1-216-296-91	SHORT	
JR015	1-216-296-91	SHORT	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
JR016	1-216-296-91	SHORT	
JR017	1-216-296-91	SHORT	
JR018	1-216-296-91	SHORT	
JR019	1-216-296-91	SHORT	
JR020	1-216-296-91	SHORT	
JR021	1-216-296-91	SHORT	
JR022	1-216-296-91	SHORT	
JR023	1-216-296-91	SHORT	
JR024	1-216-296-91	SHORT	
JR025	1-216-296-91	SHORT	
JR026	1-216-296-91	SHORT	
JR027	1-216-296-91	SHORT	

COIL

L501	1-412-531-31	INDUCTOR	33UH
L502	1-412-531-31	INDUCTOR	33UH
L503	1-411-594-41	COIL, CHOKE	5MMH
L505	1-412-552-11	INDUCTOR	2.2MMH
L506	1-412-545-11	INDUCTOR	470UH
L508	1-416-394-11	COIL, HORIZONTAL LINEARITY	
L509	1-416-393-11	COIL, HORIZONTAL LINEARITY	
L510	1-416-367-11	COIL, HORIZONTAL CENTER	
L603	1-412-537-31	INDUCTOR	100UH
L604	1-412-537-31	INDUCTOR	100UH
L605	1-406-665-11	COIL, CHOKE	100UH
L606	1-406-665-11	COIL, CHOKE	100UH
L901	1-412-537-31	INDUCTOR	100UH
L902	1-412-537-31	INDUCTOR	100UH

FILTER

LF602 ⚠	1-429-180-11	TRANSFORMER, LINE FILTER	

TRANSISTOR

Q501	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q502	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q503	8-729-035-54	TRANSISTOR 2SJ449(I)	
	4-382-854-11	SCREW (M3X10), P, SW (+) (FOR Q503)	
Q504	8-729-031-89	TRANSISTOR 2SC3941A-Q(TA)	
Q505	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q506	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q507	8-729-041-64	TRANSISTOR BU2527AX-ON5022	
	4-382-854-11	SCREW (M3X10), P, SW (+) (FOR Q507)	
Q508	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q510	8-729-042-45	TRANSISTOR STP5NA80FI	
	4-382-854-11	SCREW (M3X10), P, SW (+) (FOR Q510	
Q511 ⚠	8-729-042-34	TRANSISTOR IRFU110	
Q512	8-729-043-16	TRANSISTOR IRLI520GLF33	
Q513	8-729-021-79	TRANSISTOR 2SK1307-01	
Q514	8-729-041-93	TRANSISTOR IRLI530GLF33	
Q515	8-729-043-16	TRANSISTOR IRLI520GLF33	
Q516	8-729-043-16	TRANSISTOR IRLI520GLF33	
Q517	8-729-326-11	TRANSISTOR 2SC2611	
Q518	8-729-140-50	TRANSISTOR 2SC3209LK	
Q519	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q520	8-729-042-23	TRANSISTOR IRFI9620GSLF35	
Q521	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q522	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q523	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q601	8-729-029-92	TRANSISTOR DTC143ESA	
Q602 ⚠	8-729-926-79	TRANSISTOR IRFIBC40G-LF38	
	4-382-854-11	SCREW (M3X10), P, SW (+) (FOR Q602)	
Q604 ⚠	8-729-029-66	TRANSISTOR DTC114ESA	
Q605	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q606	8-729-029-66	TRANSISTOR DTC114ESA	
Q901	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q902	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q903	8-729-119-78	TRANSISTOR 2SC2785-HFE	

RESISTOR

R401	1-249-383-11	CARBON	1.5	5%	1/4W F
R402	1-215-866-11	METAL OXIDE	330	5%	1W F
R403	1-214-796-00	METAL	1.5	1%	1/2W
R404	1-215-439-00	METAL	5.6K	1%	1/4W
R405	1-214-796-00	METAL	1.5	1%	1/2W
R406	1-215-447-00	METAL	12K	1%	1/4W
R407	1-249-421-11	CARBON	2.2K	5%	1/4W
R408	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R409	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R410	1-215-447-00	METAL	12K	1%	1/4W
R411	1-216-688-11	METAL CHIP	36K	0.50%	1/10W
R500	1-249-377-11	CARBON	0.47	5%	1/4W F
R501	1-247-807-31	CARBON	100	5%	1/4W
R502	1-218-758-11	METAL CHIP	180K	0.50%	1/10W
R503	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R504	1-249-377-11	CARBON	0.47	5%	1/4W F
R505	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R506	1-215-481-00	METAL	330K	1%	1/4W
R507	1-215-431-00	METAL	2.7K	1%	1/4W
R508	1-247-807-31	CARBON	100	5%	1/4W
R509	1-247-863-91	CARBON	22K	5%	1/4W
R510	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R511	1-249-381-11	CARBON	1	5%	1/4W F

D

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R512	1-249-389-11	CARBON	4.7	5%	1/4W
R513	1-215-888-00	METAL OXIDE	220	5%	2W F
R514	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R515	1-249-417-11	CARBON	1K	5%	1/4W F
R516	9-910-999-31	METAL	150	1%	1/2W
R517	1-216-393-00	METAL OXIDE	2.2	5%	3W F
R518	1-216-393-00	METAL OXIDE	2.2	5%	3W F
R519	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R520	1-249-397-11	CARBON	22	5%	1/4W F
R521	1-249-417-11	CARBON	1K	5%	1/4W F
R522	1-249-401-11	CARBON	47	5%	1/4W
R523	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R524	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R525	1-249-417-11	CARBON	1K	5%	1/4W F
R526	1-249-425-11	CARBON	4.7K	5%	1/4W
R527	1-249-429-11	CARBON	10K	5%	1/4W
R528	1-247-863-91	CARBON	22K	5%	1/4W
R529	1-249-429-11	CARBON	10K	5%	1/4W F
R530	1-216-474-11	METAL OXIDE	82	5%	3W F
R531	1-216-474-11	METAL OXIDE	82	5%	3W F
R532	1-249-385-11	CARBON	2.2	5%	1/4W F
R533	1-249-417-11	CARBON	1K	5%	1/4W F
R534	1-249-405-11	CARBON	100	5%	1/4W F
R535	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R536	1-249-417-11	CARBON	1K	5%	1/4W F
R537	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R538	1-215-905-11	METAL OXIDE	210	5%	3W F
R539	1-215-905-11	METAL OXIDE	10	5%	3W F
R540	1-215-476-00	METAL	200K	1%	1/4W
R541	1-215-421-00	METAL	1K	1%	1/4W
R542	1-215-421-00	METAL	1K	1%	1/4W
R543	1-249-389-11	CARBON	4.7	5%	1/4W F
R544	1-215-493-00	METAL	1M	1%	1/4W
R545 ⚠	1-216-691-11	METAL	47K	0.50%	1/10W
R546 ⚠	1-215-457-00	METAL	33K	1%	1/4W
R547 ⚠	1-215-487-00	METAL	560K	1%	1/4W
R548 ⚠	1-216-657-11	METAL	1.8K	0.50%	1/10W
R549 ⚠	1-215-467-00	METAL	82K	1%	1/4W
R550 ⚠	1-215-427-00	METAL	1.8K	1%	1/4W
R551	1-215-453-00	METAL	22K	1%	1/4W
R552 ⚠	1-215-465-00	METAL	68K	1%	1/4W
R553	1-216-699-11	METAL CHIP	100K	0.50%	1/10W
R554	1-218-756-11	METAL CHIP	150K	0.50%	1/10W
R556	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
R557	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R558	1-215-445-00	METAL	10K	1%	1/4W
R559	1-215-431-00	METAL	2.7K	1%	1/4W
R560	1-215-449-00	METAL	15K	1%	1/4W
R561	1-216-474-11	METAL OXIDE	82	5%	3W F

REF.NO.	PART NO.	DESCRIPTION			REMARK
R562	1-215-447-00	METAL	12K	1%	1/4W
R563	1-249-383-11	CARBON	1.5	5%	1/4W F
R564	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R565	1-215-481-00	METAL	330K	1%	1/4W
R566	1-215-859-00	METAL OXIDE	22	5%	1W F
R567	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R568	1-249-437-11	CARBON	47K	5%	1/4W
R569	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R570	1-249-417-11	CARBON	1K	5%	1/4W
R571	1-215-926-00	METAL OXIDE	33K	5%	3W F
R572	1-249-437-11	CARBON	47K	5%	1/4W
R573	1-247-887-00	CARBON	220K	5%	1/4W
R574	1-249-429-11	CARBON	10K	5%	1/4W
R575	1-260-314-11	CARBON	68	5%	1/2W
R576	1-249-437-11	CARBON	47K	5%	1/4W
R577	1-216-447-00	METAL OXIDE	27	5%	2W F
R578	1-216-423-11	METAL OXIDE	27	5%	1W F
R579	1-247-883-00	CARBON	150K	5%	1/4W
R580	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R581	1-249-429-11	CARBON	10K	5%	1/4W
R582	1-249-397-11	CARBON	22	5%	1/4W F
R583	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R584	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R585	1-260-099-11	CARBON	1K	5%	1/2W
R586	1-260-103-11	CARBON	2.2K	5%	1/2W
R587	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R589	1-249-425-11	CARBON	4.7K	5%	1/4W
R590	1-215-453-00	METAL	22K	1%	1/4W
R591	9-910-999-31	METAL	150	1%	1/2W
R592	9-910-999-31	METAL	150	1%	1/2W
R600 ⚠	1-205-998-11	WIREWOUND	1	5%	10W
R603	1-249-403-11	CARBON	68	5%	1/4W
R604 ⚠	1-202-847-00	SOLID	560K	20%	1/2W
R605 ⚠	1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R609	1-215-927-00	METAL OXIDE	47K	5%	3W F
R610	1-215-926-00	METAL OXIDE	33K	5%	3W F
R611	1-215-445-00	METAL	10K	1%	1/4W
R612	1-249-392-11	CARBON	8.2	5%	1/4W
R613	1-249-429-11	CARBON	10K	5%	1/4W
R614	1-216-381-11	METAL OXIDE	0.22	5%	3W F
R615	1-247-885-00	CARBON	180K	5%	1/4W
R617	1-249-417-11	CARBON	1K	5%	1/4W
R618	1-215-411-00	METAL	390	1%	1/4W
R619	1-249-421-11	CARBON	2.2K	5%	1/4W
R620	1-247-863-91	CARBON	22K	5%	1/4W
R621 ⚠	1-211-761-11	FUSIBLE	0.1	10%	1/2W
R622 ⚠	1-211-874-11	FUSIBLE	0.12	10%	1/2W
R623 ⚠	1-211-874-11	FUSIBLE	0.12	10%	1/2W

Note: **The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.**

Note: The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

REF.NO.		PART NO.	DESCRIPTION			REMARK
R624	⚠	1-219-154-11	FUSIBLE	0.12	10%	1/4W
R625	⚠	1-219-154-11	FUSIBLE	0.12	10%	1/4W
R626		1-215-411-00	METAL	390	1%	1/4W
R627		1-247-895-91	CARBON	470K	5%	1/4W
R628		1-215-479-00	METAL	270K	1%	1/4W
R629		1-223-480-11	METAL	5K		
R630		1-215-437-00	METAL	4.7K	1%	1/4W
R631		1-215-405-00	METAL	220	1%	1/4W
R632		1-216-049-91	METAL GLAZE	1K	5%	1/10W
R633		1-249-429-11	CARBON	10K	5%	1/4W
R634		1-249-431-11	CARBON	15K	5%	1/4W
R635		1-249-417-11	CARBON	1K	5%	1/4W
R636		1-249-417-11	CARBON	1K	5%	1/4W
R637		1-216-351-00	METAL OXIDE	1.5	5%	1W F
R638		1-215-435-00	METAL	3.9K	1%	1/4W
R639	⚠	1-211-761-11	FUSIBLE	0.1	10%	1/2W
R641		1-249-429-11	CARBON	10K	5%	1/4W F
R642		1-247-887-00	CARBON	220K	5%	1/4W F
R643		1-215-435-00	METAL	3.9K	1%	1/4W
R703		1-260-092-11	CARBON	270	5%	1/2W
R704		1-215-445-00	METAL	10K	1%	1/4W
R705		1-249-425-11	CARBON	4.7K	5%	1/4W
R706		1-249-425-11	CARBON	4.7K	5%	1/4W
R707		1-249-429-11	CARBON	10K	5%	1/4W
R708		1-249-429-11	CARBON	10K	5%	1/4W
R709		1-249-429-11	CARBON	10K	5%	1/4W
R710		1-249-429-11	CARBON	10K	5%	1/4W
R711		1-216-346-00	METAL OXIDE	0.56	5%	1W F
R712		1-215-860-11	METAL OXIDE	33	5%	1W F
R713		1-216-347-11	METAL OXIDE	0.68	5%	1W F
R716		1-215-860-11	METAL OXIDE	33	5%	1W F
R717		1-216-353-00	METAL OXIDE	2.2	5%	1W F
R718		1-215-863-11	METAL OXIDE	100	5%	1W F
R719		1-249-431-11	CARBON	15K	5%	1/4W
R724		1-216-423-11	METAL OXIDE	27	5%	1W F
R727		1-249-431-11	CARBON	15K	5%	1/4W
R728		1-215-863-11	METAL OXIDE	100	5%	1W F
R729		1-216-353-00	METAL OXIDE	2.2	5%	1W F
R730		1-215-860-11	METAL OXIDE	33	5%	1W F
R801		1-249-427-11	CARBON	6.8K	5%	1/4W
R802		1-216-089-91	METAL GLAZE	47K	5%	1/10W
R803		1-216-089-91	METAL GLAZE	47K	5%	1/10W
R804		1-215-857-11	METAL OXIDE	10	5%	1W F
R903		1-249-417-11	CARBON	1K	5%	1/4W
R904		1-249-417-11	CARBON	1K	5%	1/4W
R906		1-216-073-00	METAL GLAZE	10K	5%	1/10W
R907		1-260-087-11	CARBON	100	5%	1/2W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R908	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R909	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R910	1-249-411-11	CARBON	330	5%	1/4W
R911	1-249-413-11	CARBON	470	5%	1/4W
R912	1-249-417-11	CARBON	1K	5%	1/4W
R913	1-247-807-31	CARBON	100	5%	1/4W
R914	1-247-807-31	CARBON	100	5%	1/4W
R915	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R916	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R917	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R918	1-249-417-11	CARBON	1K	5%	1/4W
R919	1-249-417-11	CARBON	1K	5%	1/4W
R920	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R922	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R924	1-249-429-11	CARBON	10K	5%	1/4W
R925	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R927	1-216-295-91	SHORT	0		
R929	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R931	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R933	1-249-419-11	CARBON	1.5K	5%	1/4W
R934	1-249-429-11	CARBON	10K	5%	1/4W
R935	1-247-807-31	CARBON	100	5%	1/4W
R936	1-247-807-31	CARBON	100	5%	1/4W
R937	1-249-417-11	CARBON	1K	5%	1/4W
R938	1-247-807-31	CARBON	100	5%	1/4W
R940	1-215-431-00	METAL	2.7K	1%	1/4W
R941	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R942	1-215-413-00	METAL	470	1%	1/4W
R943	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R944	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R945	1-215-425-00	METAL	1.5K	1%	1/4W
R946	1-215-431-00	METAL	2.7K	1%	1/4W
R947	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R948	1-215-457-00	METAL	33K	1%	1/4W
R951	1-216-025-91	METAL GLAZE	100	5%	1/10W
R953	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R954	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R957	1-216-017-91	METAL GLAZE	47	5%	1/10W
R958	1-216-017-91	METAL GLAZE	47	5%	1/10W
R959	1-247-843-11	CARBON	3.3K	5%	1/4W

VARIABLE RESISTOR

⧓ RV501	⚠	1-241-767-21	RES, ADJ, CERMET 100K
		3-710-578-01	COVER, VOLUME, 6 MOLD (FOR RV501)

D J

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
		RELAY	
RY500	1-755-137-11	RELAY	
RY601	⚠ 1-755-031-11	RELAY	
		SWITCH	
S601	⚠ 1-571-433-21	SWITCH, PUSH (AC POWER)	
S901	1-692-431-21	SWITCH, TACTILE	
S902	1-762-816-11	SWITCH, TACTIL	
S903	1-692-431-21	SWITCH, TACTILE	
S904	1-692-431-21	SWITCH, TACTILE	
S905	1-692-431-21	SWITCH, TACTILE	
S906	1-692-431-21	SWITCH, TACTILE	
S907	1-692-431-21	SWITCH, TACTILE	
		SPARK GAP	
SG501	⚠ 1-519-422-11	GAP, SPARK	
		TRANSFORMER	
T501	⚠ 1-453-241-11	FBT ASSY (NX-4400//X4L4)	
T503	1-429-109-11	TRANSFORMER, FERRITE (DFT)	
T504	⚠ 1-429-103-11	TRANSFORMER, FERRITE (HDT)	
T505	1-429-211-11	TRANSFORMER, FERRITE (HST)	
T601	⚠ 1-431-534-11	TRANSFORMER, CONVERTER (SRT)	
		THERMISTOR	
TH501	1-807-796-11	THERMISTOR	
TH600	⚠ 1-809-827-11	THERMISTOR	
TH601	⚠ 1-809-827-11	THERMISTOR, POSITIVE	
		VARISTOR	
VA600	⚠ 1-810-622-11	VARISTOR	
VA601	⚠ 1-810-271-21	VARISTOR ZNR-14DK471U	
		CRYSTAL	
X901	1-767-641-11	VIBRATOR, CRYSTAL	
X902	1-577-611-11	OSCILALTOR, CERAMIC	

J

A-1388-207-A J BOARD, MOUNTED

1-665-744-21 J PC BOARD

REF.NO.	PART NO.	DESCRIPTION			REMARK
		CAPACITOR			
C1001	1-124-455-00	ELECT	100MF	20%	16V
C1002	1-124-455-00	ELECT	100MF	20%	16V
C1003	1-126-965-11	ELECT	22MF	20%	50V
		CONNECTOR			
CN1001	* 1-564-509-11	PLUG, CONNECTOR 6P			
CN1002	1-564-517-11	PLUG, CONNECTOR 2P			
		JACK			
J1001	1-568-267-11	JACK			
J1002	1-568-267-21	JACK			
		RESISTOR			
R1001	1-247-791-91	CARBON	22	5%	1/4W
R1002	1-247-791-91	CARBON	22	5%	1/4W
		MISCELLANEOUS			
⚠	1-416-282-21	COIL, DEMAGNETIZATION			
⚠	1-452-921-11	NECK ASSY			
⚠	1-776-027-41	CORD SET, POWER			
	3-704-372-31	HOLDER, HV CABLE			
	3-860-844-11	MANUAL, INSTRUCTION			
⚠	8-451-490-11	DY 17FRJ3-M			
⚠	8-738-733-05	CRT, 17FRFM			
⚠	8-738-733-83	ITC ASSY, 17FRFM-R3			
	4-056-722-11	DISK (WINDOWS)			
*	1-782-837-11	CABLE ASSY (15P DSUB CONNECTOR)			
⚠	1-453-241-11	TRANSFORMER ASSY, FLYBACK (NX-4400//X4L4)			

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